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Interventions That Help the Helpers: A Systematic Review and Meta-Analysis of Interventions Targeting Compassion Fatigue, Secondary Traumatic Stress and Vicarious Traumatization in Mental Health Workers

Melissa Lynn Bercier
Loyola University Chicago

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LOYOLA UNIVERSITY CHICAGO

INTERVENTIONS THAT HELP THE HELPERS:
A SYSTEMATIC REVIEW AND META-ANALYSIS OF INTERVENTIONS
TARGETING COMPASSION FATIGUE, SECONDARY TRAUMATIC STRESS
AND VICARIOUS TRAUMATIZATION IN MENTAL HEALTH WORKERS

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

PROGRAM IN SOCIAL WORK

BY
MELISSA L. BERCIER
CHICAGO, IL
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ABSTRACT

Compassion fatigue, secondary traumatic stress and vicarious traumatization have received widespread attention in the literature due to an increased awareness of negative effects mental health workers experience when working with people who have been traumatized. Mental health workers become more vulnerable to significant stress when they work with trauma victims, which can lead to many negative consequences that can affect their own health as well as their treatment of their clients. While there is much that we are learning about the causes and outcomes of mental health workers' exposure to their clients' trauma, there has been less focus on effectiveness of interventions. It is imperative for both the mental health worker and the clients with whom they work with that it is known what treatment is effective for mental health workers who experience negative effects from exposure to survivors' traumatic material. To date, no systematic review or meta-analysis has been conducted to examine the evidence of effects of interventions on compassion fatigue, secondary traumatic stress and vicarious traumatization.

The present study utilized systematic review methods and meta-analysis to quantitatively synthesize research and systematically examine interventions targeting compassion fatigue, secondary traumatic stress and vicarious traumatization to examine the effects of interventions on symptoms of compassion fatigue, secondary traumatic

stress and vicarious traumatization. A comprehensive search strategy resulted in the identification of two single group pre-posttest studies that met criteria for inclusion in the current study. Effect sizes as well as study, participant and intervention characteristics were coded and analyzed.

The meta-analytic findings showed overall medium to very large effects of indicated interventions on the reduction of compassion fatigue and burnout symptoms, and an increase in compassion satisfaction. Though, it was alarming that only two studies met the inclusion criteria. With the constructs of compassion fatigue, secondary traumatic stress and vicarious traumatization being heavily present in the literature for the past two decades, it seems warranted to locate more research regarding intervention effectiveness on this topic as the constructs relate to mental health workers.

CHAPTER ONE

INTRODUCTION

Background

Mental health workers regularly come in contact with people who have suffered from a traumatic experience. Evidence of psychological effects of traumatic experiences is becoming more apparent in those who help the traumatized (Bride, 2007). Brady, Guy, Poelstra, and Brokaw (1999) surveyed 446 female psychotherapists who work with sexual abuse survivors, and 72% reported exposure to graphic details of trauma either “sometimes” or “frequently” in their work with clients. Brady et al. concluded that female psychotherapists are more likely to exhibit trauma symptoms when they have a heavy caseload of sexual abuse clients or work with a higher number of sexual abuse survivors over the length of their careers. In another survey of 221 mental health professionals, 45.2% reported moderate amounts of exposure to traumatic material, while 24.4% reported profound amounts of exposure to traumatic material (Kadambi & Truscott, 2004). Kadambi and Truscott (2004) found that 20.8% of their sample was experiencing moderate to severe levels of traumatic stress according to the results of the Impact of Events Scale (Horowitz, Wilner & Alvarez, 1979). The literature identifies these effects of exposure to traumatic events as compassion fatigue (CF), secondary traumatic stress (STS), and vicarious traumatization (VT).

The mental health worker listens to the individual's traumatic stories in order to decipher how to most effectively help with treatment. These stories often include vivid descriptions of a traumatic experience, sometimes with reports of human-induced cruelty and abuse that elicit strong emotional expressions from the clients (Figley, 1999; Pearlman & Saakvitne, 1995a; Resick & Calhoun, 2001). Pearlman and McCann (1990) found that psychotherapists negatively responded when their client's traumatic stories triggered a personal response within themselves. A disruption in the therapists' identity, intimacy and sense of safety was found. These disruptions can greatly affect one's work with clients. A disruption in identity, for example, is related to when a psychotherapist becomes numb or desensitized when listening to clients' stories. When one's sense of safety is affected, feelings of fear of physical harm can become overwhelming causing one to develop safety practices that were not of concern prior to the exposure to traumatic stories. Disruptions in intimacy can be due to intrusive thoughts of negative experiences told by clients leading to a decreased level of enjoyment in physical intimacy for the therapist (Landis, 2010).

According to Cunningham's (2003) study with social work clinicians, working with traumatized clients can be particularly challenging (Figley, 1995; Herman, 1992; Wilson & Lindy, 1994). In a study investigating the prevalence of STS among social workers, results indicated that social workers are highly likely to have secondary exposure to traumatic experiences through their work with traumatized individuals, and the social worker is likely to experience symptoms of STS as a result of this exposure (Bride, 2007). Furthermore, Cunningham (2003) argues McCann and Pearlman's (1990)

point that workers who work with traumatized clients are in unique situations in comparison to other “difficult populations” because of the worker’s exposure “to the emotionally shocking images of horror and suffering that are characteristic of serious trauma” (p. 134).

Studies that investigate CF, STS, and VT in workers who work with the traumatized have found varying levels of reported severity (Elwood, Mott, Lohr, & Galovski, 2011). Some studies report that symptoms in mental health workers who work with the traumatized client are low level (Adams & Riggs, 2008; Collins & Long, 2003a; Dunkley & Whelan, 2006b; Ennis & Horne, 2003; Eriksson, Vande Kemp, Gorsuch, Hoke, & Foy, 2001; Follette, Polusny, & Milbeck, 1994; Ghahramanlou & Brodbeck, 2000; McLean, Wade, & Encel, 2003; Orllepp & Friedman, 2002; Wee & Myers, 2003), although other studies report that secondary trauma symptoms are moderate to high levels (Bride, Jones, & MacMaster, 2007; Conrad & Keller-Guenther, 2006; Hargrave, Scott, & McDowall, 2006; Johnson & Hunter, 1997; Way, VanDeusen, Martin, Applegate, & Jandle, 2004). The differences in the varying ranges in severity could be due in part to measurement differences and/or to the varying levels of the secondary trauma exposures. Some examples of measurement tools utilized to measure severity of secondary trauma symptoms are the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979); the Traumatic Stress Institute (TSI) Belief Scale (TSIBS; Pearlman & Mac Ian, 1995); the Trauma Attachment Belief Scale (TABS; Pearlman, 2003); the Compassion Satisfaction/Fatigue Self-Test for Helpers (CSFST; Figley & Stamm, 1996); the Professional Quality of Life Scale (ProQOL; Stamm, 2009); and the Secondary Traumatic Stress Scale (STSS;

Bride, Robinson, Yegidis, & Figley, 2003). Furthermore, Elwood et al. (2011) suggest that the differences in levels of STS symptoms can occur due to a worker's individual characteristics such as gender (Kassam-Adams, 1995) and age (Ghahramanlou & Brodbeck, 2000) as well as organizational environment characteristics such as training and supervision (Rudolph & Stamm, 1999) as well as access to support groups for staff (Landis, 2010).

The construct of burnout is often intermixed with CF, STS and VT. Maslach (1976) defines burnout as “a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do people work of some kind” (p. 3). According to the research, burnout appears to affect individuals as a result of organizational issues such as: (a) having a sustainable workload; (b) feeling competition in the workplace; (c) lacking a supportive environment; and (d) feeling deprived of what one deserves (Van der Venet, 2002). Therefore, burnout is viewed as separate from CF, STS and VT since these constructs are found to be caused by hearing one's traumatic stories as well as the level of the mental health worker's empathic engagement.

Controversy that surrounds the topics of burnout, CF, STS and VT is whether or not some of these constructs actually exist. Sabin-Farrell and Turpin (2003) posit that reactions that one has that are related to hearing traumatic material may simply be just normal, short-term psychological or physical responses. Adversely, claims have been made by Pearlman and Saakvitne (1995b) that the consequences of VT can be severe and

have immeasurable costs. As a result of these claims, an increased number of materials on the impact of VT have been published.

The constructs of CF, STS, and VT are based on symptoms and effects caused by traumatic experiences, whereas burnout is related mostly to one's work environment that may or may not include traumatic events. Recently, strong empirical evidence in research has focused on burnout being primarily caused by work environmental stressors, rather than personal problems. According to Jenkins and Baird (2002), a finding of moderate overlap with burnout supports the construct validity of STS, CF and VT. However, Jenkins and Baird (2002) caution that these constructs should be no more than moderately related due to the theoretically different impact of trauma exposure compared to the strains caused by workplace structure issues. "Burnout is related to chronic tedium in the workplace rather than exposure to specific kinds of client problems such as trauma (Schauben & Frazier, 1995), and STS and VT have not been linked to workplace conditions" (Jenkins & Baird, 2002, p. 425). These findings set burnout apart from the other three constructs, therefore burnout will be excluded from the search terms in the systematic review.

Costs of CF, STS and VT

Compassion fatigue, secondary traumatic stress and vicarious traumatization have many implications for mental health workers who suffer from them. The negative consequences associated with those who suffer from CF, STS or VT include nightmares, intrusive thoughts, disturbing imagery along with affective states such as anger, sadness, and anxiety that correspond to their clients' traumatic material (McCann & Pearlman,

1990). Figley (1995) categorized reactions trauma workers experience when working with trauma survivors: (a) indicators of psychological distress or dysfunction; (b) cognitive shifts; and (c) relational disturbances. Collins and Long (2003) elaborate on these categories and also include studies that support the findings:

1) Indicators of psychological distress include:

- Distressing emotions, including sadness or grief, depression, anxiety, dread and horror, fear, rage, or shame (Clark & Gioro, 1998; Harbert & Hunsinger, 1991; McCann & Pearlman, 1990);
- Intensive imagery by the trauma worker of the clients' traumatic material, such as nightmares, flashbacks and images (Figley, 1995; Herman, 1992; McCann & Pearlman, 1990; Stamm, 1995);
- Numbing or avoidance of efforts to elicit or work with traumatic material from the client (Figley, 1995; Herman, 1992; McCann & Pearlman, 1990);
- Somatic complaints, including sleep difficulty, headaches or gastrointestinal distress (Figley, 1995; Herman, 1992);
- Addiction or compulsive behavior, including substance abuse, workaholism and compulsive eating (Dutton & Rubinstein, 1995);
- Physiological arousal, such as palpitations and hypervigilance (Clark & Gioro, 1998; Davis, 1996); and/or
- Impairment of day-to-day functioning in social and personal roles, including missed or cancelled appointments, decreased used of supervision, chronic

lateness, and feelings of isolation, alienation, or lack of appreciation (Dutton & Rubinstein, 1995).

2) Cognitive shifts (Janoff-Bulman, 1992; McCann & Pearlman, 1990). Changes in:

- dependence/trust to reveal a chronic suspicion of others;
- safety to a heightened sense of vulnerability;
- power to an extreme sense of helplessness; and
- independence to a loss of personal control and freedom.

3) Relational disturbances:

- personal relationships can suffer as a result of increased stress or difficulties related to trust and intimacy (Clark & Gioro, 1998; White, 1998).

Moreover, Way et al. (2004) list trauma effects of clinicians who treat survivors and clinicians who treat offenders and found they share similar VT effects. Way et al. list these effects which include disrupted cognitive schemas (Pearlman & MacIan, 1995; Rich, 1997), intrusive imagery (Kassam-Adams, 1999; Pearlman & MacIan, 1995; Rich, 1997; Steed & Bicknell, 2001), decreased sense of personal safety and safety of significant others (Jackson et al., 1997; Rich, 1997), hypervigilance around strangers (Jackson et al., 1997; Steed & Bicknell, 2001), difficulties with trust and intimate relationships (Pearlman & MacIan, 1995; Rich, 1997), self-esteem issues (Pearlman & MacIan, 1995), increased cynicism, depressed mood and discouragement, disruptions in sexuality, and increased substance use (Rich, 1997).

Vicarious trauma symptoms and reactions can be immediate which include nightmares, feelings of being unsafe, avoiding activities that remind one of traumatic

incidents that were heard, feelings of anger, and numbness of emotions (Bober & Regehr, 2006). Trauma effects that have been found to be longer term are emotional and physical exhaustion, feelings of hopelessness, and viewing others with suspicion and cynicism (Illiffe & Steed, 2000; Ortlepp & Friedman, 2002; Regehr & Cadell, 1999; Schauben & Frazier, 1995).

Causes and Correlates of CF, STS and VT

Due to the serious effects of CF, STS and VT, researchers from several different professions with fields of practice, including social work, psychiatry, psychology, nursing, and emergency mental health have been studying and trying to understand and address the problem. A large body of literature has been accumulating over the past few decades related to the causes and correlates associated with CF, STS, and VT.

The causes of CF, STS, and VT have been given extensive attention in the empirical research in the field. Research points to a number of factors that have demonstrated some causal or correlational relationship to CF, STS, and VT. These will be discussed more extensively in the literature review, but some of these factors/causes include individual, organizational, and community/contextual factors.

Individual factors identified as causal or correlational to CF, STS, and VT include personal trauma history (Cunningham, 2003; Follette, Polusny & Milbeck, 1994; Ghahramanlou & Brodbeck, 2000; Hodgkinson & Stewart, 1998; Jenkins & Baird, 2002; Kassam-Adams, 1999; Pearlman & MacIlan, 1995; Wall, 2001), personal coping style (Dunkley & Whelan, 2006a; Ortlepp & Friedman, 2002), self-care strategies (Way et al., 2004), self-efficacy (Ortlepp & Friedman, 2002), level of experience (Adams et al., 2001;

Crothers, 1995; Pearlman & MacIan, 1995), gender (Kassam-Adams, 1999), age (Ghahramanlou & Brodbeck, 2000), the number or percentage of trauma cases on a therapist's caseload (Bober & Regehr, 2006; Brady et al., 1999; Chrestman, 1999; Kassam-Adams, 1995, 1999; Marmar et al., 1999; Munroe, 1990; Ortlepp & Friedman, 2002; Pearlman & MacIan, 1995; Resnick, Kilpatrick, Best, & Kramer, 1992; Schauben & Frazier, 1995), and length of time providing sexual abuse treatment (Brady et al., 1999; Chrestman, 1999; Pearlman & MacIan, 1995; Rich, 1997; Steed & Bicknell, 2001).

Organizational factors associated with CF, STS, and VT include access to supervision or consultation (Farrenkopf, 1992; Follette et al., 1994; Jackson et al., 1997; Pearlman & MacIan, 1995; Rich, 1997) and training for new and experienced clinicians (Chrestman, 1999; Follette et al., 1994; Ortlepp & Friedman, 2002; Pearlman & MacIan, 1995). A community/contextual factor of social support has also been found to have an effect on CF, STS, and VT (Chrestman, 1999; Follette et al., 1994; Jackson et al., 1997; Ortlepp & Friedman, 2002; Rich, 1997; Schauben & Frazier, 1995).

Compassion fatigue, secondary trauma stress, and vicarious traumatization are increasingly being recognized in the mental health field as a considerable risk for mental health workers who work with clients who have been traumatized (Dunkley & Whelan, 2006). When mental health workers are affected by CF, STS and VT and subsequently suffer negative symptoms, workers can run the risk of becoming ineffective in their work with clients. Researchers and practitioners have developed various strategies targeting a number of risk factors that have been associated with CF, STS, and VT resulting in intervention strategies being implemented in various settings.

Interventions Targeted at Decreasing Negative Effects of CF, STS and VT

The number of interventions designed to decrease symptoms of CF, STS and VT have been growing in the past decade. Researchers in the trauma field are recognizing more and more that traumatized clients are not the only individuals in need of interventions. Mental health workers who are working with these traumatized clients are becoming affected and displaying negative symptoms. As a result, the attention given to addressing the issue of workers who are secondarily traumatized has resulted in a number of different modalities of interventions being modified and developed to decrease symptoms of CF, STS and VT in mental health workers.

Because CF, STS and VT are recognized problems among various professions, including social work, psychology, criminal justice, emergency response teams, lawyers, doctors, nurses and others, the conceptualizations of the problem as well as the approaches used to intervene with CF, STS and VT are diverse. Intervention strategies targeting CF, STS and VT range from individual level interventions to various organizational level modalities.

Statement of the Problem

Compassion fatigue, secondary traumatic stress, and vicarious traumatization have received widespread attention in the literature due to an increased awareness of negative effects mental health workers experience when working with people who have been traumatized. Research has shown that the mental health workers' responsibility of listening to clients' and patients' experiences of human suffering may cause psychological symptoms, which in turn may lead to CF, STS, or even VT (Adams,

Figley, & Boscarino, 2008; Figley, 1995; Steed & Bicknell, 2001; Zimering, Munroe, & Gulliver, 2003). Recent research indicates that between 5% and 15.2% of therapists experience STS and VT symptoms at clinical levels (Adams & Riggs, 2008; Bride, 2007; Kadambi & Truscott, 2004).

Mental health workers become more vulnerable to significant stress when they work with trauma victims, which can lead to many negative consequences that can affect their clients. Professionals who are affected by STS are at a higher risk of making poor professional judgments than those who are not affected (Bride, Radey, & Figley, 2007; Munroe et al., 1995; Pearlman & Saakvitne, 1995a; Stamm, 1997). Dutton and Rubinstein (1995) and Newmann and Gamble (1995) assert that research has shown that defense mechanisms, such as detachment and non-empathic distancing, that mental health workers use to deal with client's traumatic experiences can lead to clients feeling emotionally isolated and detached from those workers that are trying to help them. Victim blaming (Astin, 1997) and the disruption of empathic abilities that result in therapeutic impasses or incomplete therapies (Pearlman & Saakvitne, 1995a) have also been found in therapists' work who has suffered from STS and VT. This ineffective care can be quite detrimental to the client who seeking competent treatment. According to Herman (1992) psychological trauma theory posits that traumatic events can lead to the trauma effects of psychological numbing, flooding and hypervigilance. Although these trauma affects occur in order to give the traumatized person the ability to cope with the event, they can also lessen one's ability to function optimally in the following weeks and possibly months after the traumatic event (Newman, Kaloupek, & Keane, 1996).

While there is much that we are learning about the causes and outcomes of mental health workers' exposure to their clients' trauma, there has been less focus on effectiveness of interventions. It is imperative for both the mental health worker and the clients with whom they work with that it is known what treatment is effective for mental health workers who experience negative effects from exposure to survivors' traumatic material. To date, no systematic review or meta-analysis has been conducted to examine the evidence of effects of interventions on CF, STS and VT. It is imperative that the evidence of effects of interventions be synthesized and analyzed to inform practice and policy in this area.

Purpose of the Study

The purpose of this study is to (1) conduct a systematic review and meta-analysis of interventions targeting vicarious traumatization, compassion fatigue, and secondary traumatic stress to examine the effects of interventions on symptoms of vicarious traumatization, compassion fatigue, and secondary traumatic stress in mental health workers; (2) to provide evidence-based recommendations to inform social work practice; and (3) recommend priorities for future research. This review will compare various modalities of interventions including individual, peer/collegial, agency, and organizational to explore similarities and differences in populations served, services provided and outcomes of measured effectiveness.

Research Questions

The four research questions guiding this study are:

- 1) How are intervention researchers operationalizing compassion fatigue, secondary traumatic stress and vicarious traumatization?
- 2) Do interventions targeting compassion fatigue, secondary traumatic stress, and vicarious traumatization affect symptoms and signs of psychological distress, cognitive shifts, and relational disturbances?
- 3) Are there differences in effects between individual and organizational level modalities with regard to techniques utilized and effects on CF, STS and VT?
- 4) Are different modalities of interventions more effective than others in decreasing symptoms of CF, STS and VT?

Significance of the Study

Every day mental health workers are traumatized by their clients' stories and experiences related to their own traumatic events in their lives. Research has shown that due to this secondary traumatization from hearing clients' traumatic stories as well as witnessing emotions felt by the client such as horror and fear, mental health workers can suffer psychological problems that have been defined as compassion fatigue, secondary traumatic stress, and vicarious traumatization. Since these are three terms that are used interchangeably in the literature, a synthesis of research that identifies the effectiveness of various interventions that are targeted to decrease symptoms of CF, VT, and STS would be beneficial for the mental health community. Determining which interventions are more effective by synthesizing and combining studies using a systematic

methodology and meta-analysis can add to and enhance the current empirical literature in the research community.

A systematic review and meta-analysis to synthesize the intervention (or outcome) research in this area of compassion fatigue, secondary traumatic stress, and vicarious traumatization is greatly needed and warranted. To date, no systematic review or meta-analysis has been conducted to synthesize the evidence of effects of interventions with mental health workers who are experiencing negative affects related to their work with traumatized individuals. This review and meta-analysis will fill this gap in the literature and provide evidence based recommendations to guide practice and policy.

Relevance to Social Work

Professional social workers are the nation's largest group of mental health services providers (www.naswdc.org, looked up on 2/9/2012). NASW (2012) states that there are more clinically trained social workers than psychiatrists, psychologists, and psychiatric nurses combined. Over 40% of all disaster mental health volunteers trained by the American Red Cross are professional social workers (NASW, 2012). Social workers who provide mental health services are often in positions within hospitals, community mental health centers, social service organizations, or criminal justice settings working with individuals who have experienced trauma at some point in their lives. These individuals who have experienced trauma often have the need to share their traumatic stories with a social worker. Due to their exposure to these traumatic stories, social workers can suffer negative physical and emotional consequences because of their absorption of this trauma from their clients.

According to McCann and Pearlman's (1990) definition of vicarious trauma, the cognitive schemas or core beliefs of the mental health worker can change due to the exposure of the traumatic imagery that the clients present. This change in the mental health worker's cognitive schema may cause a disruption in the view of self, others, and the world in general (McCann & Pearlman, 1990; Sabin-Farrell & Turpin, 2003).

Additional negative consequences of vicarious trauma suffered by mental health workers found by Pearlman and Saakvitne (1995) can comprise of a negative impact on feelings and relationships, poor decision making, social and professional withdrawal, substance abuse, and clinical problems.

Bober and Regehr (2006) address the issue of blaming the victim when discussing intervention strategies for mental health professionals:

As mental health professionals dedicated to the fair and compassionate treatment of victims in society, we have been strong in vocalizing concerns that those who are abused and battered not be blamed for their victimization and their subsequent traumatic response. Yet when addressing the distress of colleagues, we have focused on the use of individual coping strategies implying that those who feel traumatized may not be balancing life and work adequately and may not be making effective use of leisure, self-care, or supervision. (p. 8)

In light of these findings, it is essential to assist the social work profession in examining the effectiveness of interventions for mental health workers who are experiencing secondary trauma. Numerous interventions are being utilized; however, it is unclear which, if any, are effective or if some are more effective than others. Knowledge gained from this study can directly inform the ways in which social workers get help if they are experiencing secondary trauma as well as inform how social workers

intervene in systems and with clients who are experiencing symptoms of compassion fatigue, secondary traumatic stress, and vicarious traumatization.

CHAPTER TWO

LITERATURE REVIEW

History of Trauma Constructs

Vicarious traumatization, also referred to in the literature as compassion fatigue, secondary traumatic stress and burnout, has been an area of research that has recently been highlighted in the literature to have inconsistent and sometimes ambiguous definitions. These terms have been applied interchangeably in many studies. The validity of the results in many studies comes into question by researchers due to the unclear definitions and the interchangeable use of seemingly parallel terms. Some controversies that surround the topics of burnout, compassion fatigue (CF), secondary traumatic stress (STS) and vicarious traumatization (VT) are whether or not some of these constructs actually exist. The lack of conceptual clarification in the literature has allowed for many different authors to create their own versions of the terminology, sometimes versions that suit their own research needs (Beck, 2011). Providing a brief historical overview of burnout, CF, STS and VT will help to clarify the four terms according to the current definitional trends in the literature.

According to Baranowsky, Gentry and Schultz (2005), studies began about the psychological effects of trauma related to shell shock and combat fatigue in the late 1800s. In 1907, Baranowsky et al. reported that Carl Jung referred to what is now called “compassion fatigue” when he discussed the concept of countertransference. Jung was

concerned about therapists' exposure to their client's traumatic scenarios in sessions and how the exposure may have a negative effect on the therapist.

In the 1970s studies on the effects of psychotherapy on the treating therapists began to surface (Baranowsky et al., 2005). Also in the 1970s Maslach and Jackson first identified the construct of burnout (Maslach & Leiter, 1997). Maslach (1976) defines burnout as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do people work of some kind" (p. 3). At this time, burnout was seen as a personal problem. Recent research on burnout has now been expanded to include not only personal issues but organizational issues as well.

In 1980 post-traumatic stress disorder (PTSD) was first listed in the *Diagnostic and Statistical Manual of Mental Disorders III* (American Psychiatric Association, 1980). Since 1980, the psychological effects of traumas have been formally recognized. The first people to be diagnosed with PTSD were the veterans of the Vietnam War.

In 1983, Figley (1995) originated the concept of secondary traumatic stress (STS) when referring to sexual assault survivors and combat veterans' significant others. Devilly, Wright, and Varker (2009) contend that STS was actually originated after the revision to the DSM-III in the mid to late 1990's when Criterion A for PTSD was revised to include witnessing or hearing about threatened death or serious injury occurring to another individual (*American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders*, 1994).

By the 1990s, the field of traumatology was recognized (Baranowky et al., 2005). Research studies on the reactions of therapists to listening to their client's traumatic stories began at this time. Vicarious traumatization (VT) was first conceptualized by McCann and Pearlman (1990) in 1990. Vicarious traumatization was originally focused on the effects of working with trauma survivors on the therapist. Although this continues to be the focus in the literature, currently more emphasis is placed upon the change in cognitions with the therapist after these exposures to traumatic material.

Joinson (1992) first used the term compassion fatigue (CF) while studying burnout in emergency room department nurses. Between 1992 and 1995, Figley (1995) renamed secondary traumatic stress to compassion fatigue because he felt that this term was less stigmatizing and had a more positive connotation. Figley (2002) has described CF as a form of caregiver burnout. In 2003, Salston and Figley (2003) made a recommendation to eliminate the burnout component in CF because this was arbitrarily added in some research studies when the CF construct was not found to be strongly correlated with Maslach's Burnout Inventory (MBI) tool.

The construct of burnout is the first term that refers to worker stress that appeared in the literature. The foundation of burnout has been solid and stable in the research. The Maslach Burnout Inventory (MBI) measurement tool has been found to be valid and reliable for over a decade and has been utilized in the 25 plus years of research (Maslach & Jackson, 1981).

Reviewing how researchers operationalize compassion fatigue, secondary traumatic stress and vicarious traumatization as constructs can inform the definitional

issues that surround them. Systematically reviewing the literature and looking at the interventions utilized for each of the constructs individually as well as seeking a deeper understanding of how subjects are included and excluded in studies can bring researchers closer to the possibility of grouping the three constructs in a more meaningful way.

Definitions

Vicarious traumatization (VT), also referred to in the literature as compassion fatigue (CF), secondary traumatic stress (STS) and burnout, has been an area of research that recently has been highlighted in the literature to have inconsistent definitions. These terms have been applied interchangeably in many studies which have led to considerable confusion in distinguishing these terms from one another. Craig and Sprang (2010) concluded that “to date, there is no definitive data that suggests the constructs are conceptually distinct, suggesting that a final decision over the most appropriate term to use in any given situation would be premature” (p. 320).

Burnout

Of the four terms, burnout is the first to appear in the literature. The literature review by Edwards et al. (2000) shows that there is not a standard definition of burnout. Variations of Maslach’s definition appear to be the most prominent in the literature. Maslach (1976) defines burnout as “a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do people work of some kind” (p. 3). Maslach (2001) establishes that emotional exhaustion is the key feature of burnout. Depersonalization, the second feature of burnout, also includes the feeling of cynicism. The interpersonal context of burnout is

the negative, callous or exceedingly detached responses to various aspects of the job.

Maslach's findings demonstrate that reduced personal accomplishment within burnout is in relation to feelings of incompetence and lack of achievement and productivity at work.

More recently, research has shown that burnout occurs due to a disparity between the worker and the job (Leiter & Laschinger, 2006). According to Sabo (2011), research supports six work-life issues that involve the disparity between the worker and the job as the most plausible explanation for burnout. These six issues are: work overload, lack of control, lack of reward, lack of community, lack of fairness, and value conflict (Leiter & Laschinger, 2006; Leiter & Maslach, 2004).

Compassion Fatigue

Most authors refer to Figley's (1995) definition of compassion fatigue (CF) in their research (Boscarino, Adams, & Figley, 2010; Devilly et al., 2009; Sexton, 1999). Figley (1995) describes compassion fatigue as "identical to secondary traumatic stress disorder (STSD) and is the equivalent of PTSD" (p. xv). Figley defines CF as the stress connected with the level of empathic engagement the worker has to the victim or client. Through this empathic engagement, the worker can experience emotions and symptoms which are similar to those of their client (Figley, 1995). Figley adds that CF is "the reduced capacity or interest in being empathetic or 'bearing the suffering of clients' and is the 'natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a person'" (p. 2).

Secondary Traumatic Stress

Craig and Sprang (2010) assert that Figley (1993, 1995) created the term “secondary traumatic stress” when he was extending the concept of vicarious trauma, which was coined by McCann and Pearlman (1990). Figley (1995) renamed STS as CF because he felt that CF has less stigma attached to it. Since Figley has been credited with the formulation of the concept of STS which he then later renamed to “compassion fatigue,” a majority of the authors defer to Figley’s (1995) definition of STS as “the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person” (p. 10). Some authors allege that STS’ rapid onset sets STS apart from other concepts (Beck, 2011; Devilly et al., 2009; Figley, 1995; Jenkins & Baird, 2002; Sabin-Farrell & Turpin, 2003; Sexton, 1999). Bocarino et al. (2010) introduce STS in their research as the same concept as CF and VT. Jenkins and Baird (2002) cite that STS and VT have the same definition; however Stamm (1999) contends that STS implies a temporary stress response.

Vicarious Traumatization

The fourth and final concept to be defined is vicarious traumatization (VT). The definition to which most researchers defer is Pearlman and Saakvitne’s (1995) definition which states that vicarious traumatization is “the cumulative transformation in the inner experience of the therapist that comes about as a result of empathic engagement with the client’s traumatic material” (p. 31).

Stamm (1999) defines STS as only a temporary stress response with a rapid onset whereas VT is viewed as a cognitive shift within the therapist's thinking that accumulates over time and affects one's world view (McCann & Pearlman, 1990). Figley (1995) disagrees with McCann and Pearlman's (1990) notion of accumulation and argues that only one severe exposure to a client's traumatic material can lead to VT. Sabin-Farrell and Turpin (2003) conclude that the evidence for VT to exist within trauma workers is inconsistent and ambiguous.

Discussion

In general, the authors seem to agree on the definitions of the terms, but the terms are subsequently misused or generalized into similar concepts. It is difficult to determine what the actual causes of CF, STS and VT are when the literature is not consistent with the usage of the constructs.

There are many inconsistencies with the ways in which the phenomenon of secondary trauma is defined and operationalized in the trauma research. VT appears to be used as the default term when researching compassion fatigue, secondary traumatic stress and vicarious traumatization. This is due to the fact that VT relates specifically to trauma work as well as incorporating the intrinsic and extrinsic factors that can cause VT (Dunkley & Whelan, 2006a).

Resulting from the confusion about the terms to describe the effects of trauma work, various authors have made attempts to clarify the concepts (Jenkins & Baird, 2002; Sabin-Farrell & Turpin, 2003). Sabin-Farrell and Turpin begin clarifying by simply stating that STS and VT occur specifically when working with trauma survivors whereas

burnout and CF can occur with any type of client work. VT stands out because by definition it is an actual cognitive change within the therapist whereas STS is related to social and emotional symptomology (Jenkins & Baird, 2002). When disruptions in therapists' cognitions were assessed, the results were inconclusive (Sabin-Farrell & Turpin, 2003). Additionally Sabin-Farrell and Turpin found that some studies looking for VT did not include any assessments for disruptions in cognitions which make evidence, if any VT exists, unclear. Methodological issues also arise since the majority of research on VT is done through questionnaires. Validated assessment tools are not currently available to measure VT (Sabin-Farrell & Turpin, 2003).

Najjar, Davis, Beck-Coon, and Doebbeling's (2009) systematic review of 57 compassion fatigue studies report their inability to adequately state conclusions due to the ambiguous definition of CF that fails to set itself apart from other related constructs in the literature, such as burnout, STS and VT. Najjar et al. (2009) acknowledge that there are indeed accepted similarities within the research among all four constructs, but there are also differences that need to be further researched in future studies. The similarities of CF, burnout, VT and STS that Najjar et al. (2009) highlight are that they "can be caused by emotional engagement with patients, they can negatively affect the services provided by the healthcare professional, they share risk factors of empathic ability and interpersonal demands and they result in psychological distress (Jenkins & Baird, 2002; Najjar et al., 2009, p. 271). Some have proposed that VT is differentiated from STS in that VT is a transformation experienced by mental health workers due to their empathic engagement with the patients' trauma material, which is a cumulative process (Najjar et

al., 2009; McCann & Pearlman, 1990; Pearlman & MacLan, 1995) whereas STS is a reference to a set of psychological symptoms that are acquired through the exposure to a patients' suffering from traumatic experiences (Baird & Kracen, 2006; Najjar et al., 2009).

Currently there are no agreed upon definitions, tools or measures that can adequately be utilized to differentiate the four concepts therefore, studies have recurrently used different terms to refer to the same concept which has subsequently led to the inconsistencies in the literature (Najjar et al., 2009). The majority of the empirical studies in the area of secondary trauma have used the vicarious traumatization (VT) construct. Due to this reason, the term *vicarious traumatization* or *VT* will generally be used throughout this paper unless another term has been used specifically in the research cited.

Measures

Research has been significantly limited in the area of trauma work due to the confusion that surrounds the concepts of burnout, CF, STS and VT. The controversial issues of these four constructs are not only definitional issues, but also are associated with the reliability and validity of the measures utilized to study these concepts.

Four main instruments reported in the literature are designed to assess for secondary trauma. The Compassion Fatigue Self-Test (CFST; Figley, 1995) and the Professional Quality of Life Scale (ProQOL; Stamm, 2005) both assess for CF and STS. The ProQOL is the more current version (and third revision) of the CFST (Stamm, 2005). The Traumatic Stress Institute's Belief Scale, Revision L (TSI-BSL; Pearlman, 1996)

assesses for VT. And finally, the Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis, & Figley, 2003) is used to measure STS.

Three additional instruments are useful for assessing for other more generalized trauma related symptoms and coping strategies. These instruments are: the Symptom Checklist 90-Revised (SCL-90-R; Derogatis, 1983); the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979); and the Coping Strategies Inventory (CSI; Bober, Regehr, & Zhou, 2006).

Compassion Fatigue Self-Test (CFST)

The Compassion Fatigue Self-Test (CFST) was originally designed for psychotherapists by Figley (1995) which included two subscales for compassion fatigue and burnout. The instrument was later revised to the Compassion Satisfaction/Fatigue Self-Test (CSFST) by Figley and Stamm between 1995 and 1998 to include a third subscale for compassion satisfaction (see Appendix A). This 66-item scale assesses for compassion fatigue, compassion satisfaction and burnout with a 6-point Likert scale (0 = *never*, 5 = *very often*). Reported internal consistency reliability alphas range from 0.86 to 0.96 on two subscales from this instrument (i.e., compassion fatigue and burnout) and a structural reliability coefficient (Tuckers) of .91 (Figley & Stamm, 1996; Jenkins & Baird, 2002). Good evidence of reliability and internal consistency alpha scores for each of the three subscales has been found in the psychometric properties of the CSFST (Bride, Radey, Figley, 2007; Stamm, 2002). According to Stamm, the alpha reliability on the compassion fatigue subscale is .87 with a 16.04 standard deviation. The burnout subscale reliability is .90 with a 10.78 standard deviation. Finally, the alpha reliability of

the compassion satisfaction subscale is .87 with a 13.15 standard deviation. Jenkins and Baird (2002) state that although there has been wide application of the CFST and CSFST, there is little published research. Scores have been related to greater secondary trauma vulnerability for therapists with trauma histories (Good, 1996) and to level of education and training (Good, 1996; Rudolph, Stamm, & Stamm, 1997).

Professional Quality of Life Scale (ProQOL)

The Professional Quality of Life Scale (ProQOL) is a 30-item instrument with a 6 point Likert scale (1 = *never*, 6 = *very often*) that screens for compassion fatigue, burnout, and compassion satisfaction. Compassion satisfaction (CS) is the pleasure gained from having the ability to do the work within one's profession well (Stamm, 2005). This instrument emerged to replace the CFST for two reasons: the CFST has known psychometric problems (Figley & Stamm, 1996; Jenkins & Baird, 2002; Larson, Stamm, & Davis, 2002); and the name change was to support positive system change to prevent or ameliorate the negative effects of caregiving and reinforce the positive effects of providing care (Stamm, 2005). There are three subscales within the ProQOL that are psychometrically unique and cannot be combined with the other scores. The first subscale is compassion satisfaction that has an alpha scale reliability of 0.87. The second, burnout, has an alpha scale reliability of 0.72. Compassion fatigue is the third subscale with an alpha scale reliability of 0.80.

Traumatic Stress Institute's Belief Scale, Revision L (TSI-BSL)

The Traumatic Stress Institute's Belief Scale, Revision L (TSI-BSL) is an 80-item instrument with a 6-point Likert scale (1 = *disagree strongly*, 6 = *agree strongly*) that is

used to measure VT symptoms by assessing for disrupted cognitive schemas. “The TSI BSL measures the disruptions in beliefs about self and others that arise from psychological trauma or from vicarious exposure to trauma material through psychotherapy or other helping relationships” (Deville et al., 2009, p. 377). Disruptions in five cognitive schemas/beliefs are measured. These five cognitive schemas/beliefs are: safety, trust, esteem, intimacy, and control. Each cognitive schema/belief is related to self and others, yielding 10 subscales: self-safety, other-safety, self-esteem, other-esteem, self-trust, other-trust, self-intimacy, other-intimacy, self-control, and other-control (Jenkins & Baird, 2002).

Scores obtained include a total score calculated from the sum of all responses; a higher score indicates greater cognitive schema disruption. The average score for mental health professionals is 166.83 (Pearlman & MacIain, 1995). Cunningham (1996), Lee (1995), and Pearlman and MacIain (1995) found higher scores among trauma therapists with personal trauma histories, but Schauben and Frazier (1995), Green (1996), and Simonds (1996) did not (Jenkins & Baird, 2002). These discrepancies in scores could be attributed to participants’ concern about appearing weak or affected by their personal trauma history and then adjusting their responses accordingly. Also, it is unclear if any of the participants had previous treatment for their personal histories of trauma which could make their score lower at that point in time.

Pearlman’s review of unpublished studies reported overall internal consistency reliability of 0.98 (Pearlman, 1996), with subscale reliabilities ranging from 0.77 for other-control to 0.91 for self-esteem (Jenkins & Baird, 2002). Schauben and Frazier

(1995) studied psychologists and counselors working with sexual violence survivors and reported internal consistency reliabilities of five selected subscales ranging from 0.68 to 0.84. Satisfactory reliabilities are also reported by Brady et al. (1999), Cunningham (1996), and Pearlman and MacIain (1995).

Secondary Traumatic Stress Scale (STSS)

The STSS is a 17-item instrument with a 5-point Likert scale that measures STS by the frequency of intrusion, avoidance and arousal symptoms associated with indirect exposure to traumatic incidents through professional relationships with clients who have been traumatized over the past seven days (Bride et al., 2003). The STSS has good reliability of 0.93, utilizing Cronbach's alpha for the total score. According to Devilly, Wright, and Varker (2009), the STSS is very unique compared to other instruments that measure traumatic stress symptoms because it refers specifically to 'work with clients' as the traumatic stressor.

Symptom Checklist 90 – Revised (SCL-90-R)

The SCL-90-R is a 90-item, self-report instrument with a 5-point Likert scale (0 = *not at all*, 4 = *extremely*) that assesses symptoms of general psychological distress for the last seven days. The internal consistency of the scale in a study by Pearlman and MacIain (1995) was found to be 0.96 with Cronbach's alpha.

Impact of Event Scale (IES)

The IES is a 15-item, self-report instrument with a 4-point Likert scale (1 = *not at all*, 4 = *often*) that measures trauma related distress (Horowitz et al., 1980). Typically this measurement tool is used in studies of trauma survivors although it can be used to

detect distress that is also *related* to traumatic incidents, which can indicate VT (Pearlman & MacIlan, 1995). Pearlman and MacIlan suggest directing participants to “Decide how true each item is for you these days as it applies to the traumatic material of your clients” (p. 560). They reported that avoidance and intrusion subscales each had an internal consistency (Cronbach’s alpha) of 0.86, and a test-retest reliability of 0.87. According to Sabin-Farrell and Turpin (2003) in a systematic review, the IES is one of the most commonly used instruments in research related to STS or VT (Bober & Regehr, 2006).

Coping Strategies Inventory (CSI)

The CSI is composed of two sections: the CSI-Belief Scale (CSI-B) and the CSI-Time Scale (CSI-T). The CSI-B assesses beliefs that trauma therapists hold regarding which coping strategies will lead to lower levels of secondary trauma (Bober et al., 2006). There are three subscales within the CSI-B which are leisure, self-care, and supervision. The subscales have internal reliability coefficients of 0.71-0.82 (Bober et al., 2006). The CSI-T assesses time available for engaging in coping strategies. There are four subscales in the CSI-T: leisure, self-care, supervision, and research/development. These subscales have internal reliability coefficients of 0.67-0.80 (Bober et al., 2006).

Discussion

Boscarino, Figley, and Adams (2004) discuss the methodological and conceptual problems with research on CF. The scales created to measure CF have had few validation studies along with little information provided on the psychometric properties

of the scales used (Boscarino et al., 2004; Figley, 1999; Gentry, Baranowsky, & Dunning, 2002; Stamm, 2002). Also, control groups have not been included in many of the CF studies in order to examine possible organizational factors or other factors that may increase a therapist's likelihood of experiencing CF (Jenkins & Baird, 2002; Pearlman & MacIan, 1995; Schauben & Frazier, 1995).

The amount of empirical evidence of VT is very minimal and is described as being "based on the anecdotal experiences of therapists" (Sexton, 1999, p. 396). Pearlman and MacIan (1995) sent a survey regarding VT using the TSI Belief Scale, Revision L (TSI-BSL; Pearlman, 1996) to 780 trauma therapists and had 188 respondents. They found that those therapists with a history of trauma reported more VT than those without a trauma history, $F(12, 169) = 2.25, p < .05$. In similar studies, Cunningham (1996) and Lee (1995) also found higher TSI-BSL scores among trauma therapists with a trauma history (as cited in Jenkins & Baird, 2002). Adversely, Schauben and Frazier (1995), Green (1996), and Simonds (1997) did not find higher TSI-BSL scores among trauma therapists with a trauma history.

Devilly, Wright, and Varker (2009) used the Copenhagen Burnout Inventory (CBI) to measure burnout; the Secondary Traumatic Stress Scale (STSS) to measure STS; and the TSI Belief Scale-Revision L (TSI-BSL) to measure VT. The STS predictors were found to be the same as burnout, i.e. perceived interpersonal support, caseload, and satisfaction with work as a mental health professional (Devilly et al., 2009). Devilly et al. found that exposure to patients' traumatic material by mental health professionals did not affect VT, STS or burnout; rather it was work related stressors that best predicted

distress in therapists, which contradicts the theory and research of Figley (1995) and Pearlman and Saakvitne (1995), the originators of these constructs. Devilly et al. (2009) concludes that the three constructs of STS, VT and burnout appear to measure the same phenomenon and that STS and VT are better predicted by the model for burnout than their own theoretical models. According to Devilly et al. STS and VT were found to correlate moderately highly ($r = 0.49$, $p < 0.01$), which indicates a strong convergence between the constructs. Additionally, STS was found to correlate very highly with burnout ($r = 0.62$, $p < 0.01$), which Devilly et al. found to be unexpected due to the theoretical differences between the two constructs. Finally, VT also correlated highly with burnout ($r = 0.51$, $p < 0.01$), which was also unexpected due to the theoretical differences between these two constructs.

Jenkins and Baird (2002) examined the concurrent, discriminant, and construct validity of the instruments designed to measure the constructs of STS, CF and VT by comparing the instruments with each other and with more established measures of burnout and general distress. Jenkins and Baird (2002) stress caution when using either the TSI-Belief Scale to measure VT or the Compassion Fatigue Self Test (CFST) when measuring STS, CF and/or burnout, because neither scale has substantial psychometric evidence yet, nor has their association been studied. Most studies measuring VT have only used self-report questionnaires and questions have been raised about the validity of the results. Of all the scales in the trauma studies, the Maslach Burnout Inventory (MBI) is considered the best validated measure of burnout and is the most widely accepted scale in measuring burnout (Jenkins & Baird, 2002).

Causes and Correlates of CF, STS and VT

The causes of CF, STS and VT have been given significant consideration in the extant literature in the field; however causation remains unclear as it is challenging to ascertain if CF, STS and VT is a cause or an effect of the factors identified in research. Much of the research only lends itself to concluding significant correlation with a number of variables that have been studied. Historically, individual factors were the primary focus of research in the search for causes of CF, STS and VT (Bober & Regehr, 2006). Now researchers are taking a more critical look at CF, STS and VT and are exploring alternative hypotheses and variables, thus leading to additional explanations of why some mental health workers suffer from CF, STS and VT and why some do not. Consideration of organizational factors and individual levels of empathic engagement is becoming more dominant in the research.

Because empirical evidence regarding the causes and correlates of CF, STS and VT often provides the basis for the development of interventions targeting CF, STS and VT, this research will be explored. Thus factors that have been linked to CF, STS and VT, including individual, organizational, and community/contextual factors will be considered.

Individual Factors

Personal or individual factors identified as causal or correlational to CF, STS, and VT include personal trauma history (Cunningham, 2003; Follette, Polusny & Milbeck, 1994; Ghahramanlou & Brodbeck, 2000; Hodgkinson & Stewart, 1998; Jenkins & Baird, 2002; Kassam-Adams, 1999; Pearlman & MacIain, 1995; Wall, 2001), personal coping

style (Dunkley & Whelan, 2006a; Ortlepp & Friedman, 2002), self-care strategies (Way, VanDeusen, Martin, Applegate, & Jandle, 2004), self-efficacy (Ortlepp & Friedman, 2002), level of experience (Adams et al., 2001; Crothers, 1995; Pearlman & MacIan, 1995), gender (Kassam-Adams, 1999; Lind, 2000; Meldrum, King, & Spooner, 2002; Meyers & Cornille, 2002; Pearlman & MacIan, 1995; Wee & Myers, 2002), and age (Ghahramanlou & Brodbeck, 2000). These individual factors will be separated into demographic variables and personality and coping variables and will be further discussed in the following two sections.

Demographic variables. Several studies have shown that less experienced therapists have shown greater effects of VT (Adams et al., 2001; Crothers, 1995; Pearlman & MacIan, 1995). Dunkley and Whelan (2006a) suggest that as therapists develop into more experienced professionals their schemas become less disruptive and the therapists will experience decreased VT effects. Furthermore, Steed and Downing (1998) found that a majority of counselors did not identify an increase in negative effects as their personal experience with sexual assault victims increased over time. Additionally, in a study on trauma impact on social work clinicians, Cunningham (2003) found a significant but negative correlation ($r = -.23, p = .001$) between the number of years in specialty and a negative total score on the Traumatic Stress Institute Belief Scale, Revision L (TSI-BSL). The number of years in specialty also correlated negatively with the subscales of self-safety on the TSI-BSL ($r = -.17, p = .01$) and other-esteem ($r = -.14, p = .04$) (Cunningham, 2003). Cunningham's findings indicate that clinicians with more

experience in their specialty populations reported fewer disruptions in the cognitive schemas of self-safety and other-esteem.

Regarding gender and STS, two studies found that women reported more STS symptoms than men (Kassam-Adams, 1999; Meyers & Cornille, 2002), one found that men reported more symptoms (Wee & Myers, 2002), one showed that symptoms differed by gender (Lind, 2000), and two found no gender differences (Meldrum, King, & Spooner, 2002; Pearlman & MacIlan, 1995).

Younger age was found to be a significant predictor of higher levels of secondary trauma intensity in a study of 89 sexual assault trauma counselors, ages ranging from 20 to 63 years old (Ghahramanlou & Brodbeck, 2000). Similarly, in a study of 259 trauma therapists with the mean age of 41.31 ($SD = 9.29$) years, Bober and Regehr (2006) found that the older therapists had lower levels of distress on the IES ($r = -.14, p \leq .05$). Higher levels of secondary trauma intensity in younger mental health workers could be attributed to simply having less experience in the field and not yet having a complete understanding on how to handle traumatic situations. Also, the longer one works in the field the more immune one can become to hearing traumatic stories therefore allowing a more experienced worker to suffer less intense secondary trauma.

Personality and coping variables. The research findings have been conflicted regarding the counselor's personal trauma history and its influence on VT (Dunkley & Whelan, 2006). Pearlman and MacIlan (1995) studied VT in 188 self-identified trauma therapists and found that the therapists with a personal trauma history experienced greater disruptions than those without. Cunningham (2003) found a positive and significant

correlation ($r = .19, p = .01$) between working with clients who have experienced sexual abuse and the mental health professional having a personal history of sexual abuse.

Ghahramanlou and Brodbeck (2000) also found that a personal trauma history was a significant predictor of higher levels of secondary trauma intensity in a study of 89 sexual assault trauma counselors. Furthermore, Pearlman (1996) found a significant and positive correlation between having a history of sexual abuse and the subscales of self-safety ($r = .15, p = .02$) and other-esteem ($r = .13, p = .04$).

In contrast to these findings, Schauben and Frazier (1995) investigated therapists who work with sexual violence survivors who themselves had a personal history of sexual violence (i.e., either rape or incest). They found that the therapists' symptomology was not related to their own personal trauma history. Schauben and Frazier concluded that a therapists' own personal history of sexual violence has the potential to create more empathy and therefore enhance the ability of the therapist's assessment techniques.

Creamer and Liddle (2005) examined STS and therapist characteristics in disaster mental health workers who responded to the terrorist attacks of September 11, 2001. Creamer and Liddle also concluded that there was no significance between the therapists' personal trauma history and their STS symptoms using the IES which assesses the two domains of trauma symptoms: intrusion and avoidance (Horowitz, Wilner, & Alvarez, 1979). The IES total scores can range from 0 to 75, with scores less than 8 deemed as low severity of symptoms, scores 9 through 25 deemed as medium, scores 26 to 43 deemed as high, and above 44 is considered severe. Although, according to Creamer and

Liddle (2005) therapists who had a history of therapy where they discussed their own personal past trauma had higher IES scores ($M = 20.62$; $SD = 14.51$) than those who had not had a history of therapy where they discussed their own personal past trauma ($M = 11.86$; $SD = 11.76$).

Ortlepp and Friedman (2002) measured counselor's personal coping style with Antonovsky's (1987) Orientation to Life questionnaire. Personal coping style is indicated by a sense of coherence construct which includes a sense of manageability, meaningfulness, and comprehensibility. They found that personal coping style was strongly related to counselor's reactions to their trauma counseling experience. When counselors' levels of coherence were reported high then reported levels of STS were low; and their reported levels of role satisfaction were high (Ortlepp & Friedman, 2002). This finding supports other studies where coping style consistently was found to moderate the stress experienced by trauma counselors (Bartone et al., 1989; Follette et al., 1994; Hodgkinson & Shepherd, 1994, as cited in Ortlepp & Friedman, 2002).

Schauben and Frazier (1995) assessed the effects of working with sexual violence survivors and found five coping strategies that were associated with lower symptom levels of VT. These five coping strategies were: (1) active coping; (2) seeking emotional support; (3) planning; (4) seeking instrumental support; and (5) humor. In Schauben and Frazier's (1995) assessment, the subjects also listed additional coping strategies, which were: physical health and well-being; spiritually-oriented activities; and various leisure activities. Dyregrov and Mitchell (1992) found that emergency personnel who work with traumatized individuals use coping strategies after the traumatic event such as:

suppressing of emotions, distancing from certain aspects of the event, dehumanizing aspects of the event, and talking about their feelings.

In a study that compared VT in clinicians who treat survivors of sexual abuse to VT in clinicians who treat offenders of sexual abuse, the self-care strategies of physical exercise, spiritual practices, seeking support from family/friends, and seeking own therapy was measured by the IES (Way et al., 2004). It was found that clinicians who treat survivors were more likely than clinicians who treat offenders of sexual abuse to utilize the self-care strategies listed above, $t(347) = 3.50$, $df = 345$, $p = .0005$.

According to Ortlepp and Friedman (2002), relationships between self-efficacy and the STS indicators in their study of STS in lay trauma counselors were statistically significant. This significance showed that the stronger the counselors' perceptions of their required skills in trauma counseling that they possessed and their perceived effectiveness, the less STS and burnout was reported.

Palm, Polusny, and Follette (2004) argue that the adaptation to the trauma material heard by the disaster and trauma worker is dependent on the interaction between the characteristics of the situation and the characteristics of the individual. Three situational characteristics that have an effect on the adaptation of trauma material have been found in previous studies: listening to descriptions of graphic details of the event; personal event-related loss; and consecutive interactions with trauma survivors (Durakovic-Belko, 2003; Follette, 1994; Pearlman & Saakvitne, 1995).

Palm et al. (2004) studied trauma reactions in disaster and trauma workers. Disaster and trauma worker's coping skills, their current stress, and their physical and

mental health are the three individual characteristics that assist with adaptation to trauma material. Palm et al. found four individual strategies used by these workers in order to cope more effectively: (1) spending more time with other people; (2) asking for support from others; (3) engaging in activities that can provide a sense of purpose (i.e., volunteer activities); and (4) self-care (i.e., attending to physical and psychological health).

Organizational Factors

The values and culture of a work environment set the expectations about the work that is done with clients. Organizations that work with clients who have had traumatic experiences should acknowledge and normalize the impact that trauma can have on the individual worker and the organization itself (Bell, Kulkarni, & Dalton, 2003). Workers may feel inadequate or ineffective at their jobs when working with traumatized clients. Palm et al. (2004) identify the following strategies that could be implemented in the work environment in order to cope with or help to reduce trauma reactions: limiting caseloads with trauma clients; not scheduling one trauma client after the other; allowing for breaks during the day; providing opportunities for co-workers to interact and discuss cases; providing support groups or time to attend the groups; and providing vacation time. These factors will be further discussed in the following sections.

Caseload. The number or percentage of trauma cases on a therapist's caseload has been an organizational factor identified as correlational to CF, STS, and VT (Bober & Regehr, 2006; Brady et al., 1999; Chrestman, 1999; Kassam-Adams, 1995, 1999; Ortlepp & Friedman, 2002; Pearlman & MacIlan, 1995; Resnick, Kilpatrick, Best, & Kramer, 1992; Schauben & Frazier, 1995). Research has shown an association between having a

more diverse caseload and having decreased VT (Chrestman, 1999). Brady et al. (1999), Kassam-Adams (1995), and Schauben and Frazier (1995) all found that increased distress reported by mental health workers is associated with the number of treated trauma survivors. Furthermore, Schauben and Frazier found that therapists who had a higher percentage of trauma cases in their total caseload reported more disturbed beliefs about themselves and others, more post-traumatic stress disorder symptoms, and more self-reported VT. However, Follette (1994) and Baird and Jenkins (2003) found no significant relationship between the mental health worker's psychological distress and the number of trauma survivors in their caseload.

Bober and Regehr (2006) established that the hours per week spent counseling traumatized individuals was more highly correlated with IES total ($r = .31, p \leq .001$), avoidance ($r = .24, p \leq .001$), and intrusion ($r = .34, p \leq .001$). Ortlepp and Friedman (2002) assert when trauma counselors' exposure to traumatic material is purposefully controlled, meaning limiting the number of trauma survivors counseled per incident, the counselors' post-traumatic stress disorder (or STS) symptoms may be prevented. In Kassam-Adams' (1995) study of psychotherapists who treat sexually traumatized clients, the therapists' STS was found to be directly related with the level of exposure to the clients.

Supervision provided by manager/supervisor. The use, availability and quality of supervision have been shown to affect CF, STS and VT. Several studies have found that an important coping strategy for dealing with VT is the provision of adequate supervision for the worker (Brady et al., 1999; Follette & Batten, 2000; Mauldin, 2001;

Sexton, 1999; Sommer, 2003). Dalton (2001) found that not only the number of hours of supervision the social worker received but also simply the number of times a social worker received supervision were positively related to low levels of STS. Therefore, it appears that not only is the total amount time of supervision important, but also the notion of supervision being accessible for any amount of time is important in the reduction of symptoms of STS. In support of these findings, Neumann and Gamble (1995) suggest that counselors with less experience were especially vulnerable to VT when they did not have adequate access to supervision. Wilson (1998) conducted a quantitative and qualitative study on 20 crisis counselors in South Africa which examined the perceived effectiveness of supervision with counselors suffering from STS. Wilson's (1998) results indicated that the process of supervision can help to decrease the effects of STS.

Peer supervision and group support. Peer supervision can function as an important resource in lessening the effect of VT (Catherall, 1995). According to Catherall (1995), peer supervision can provide normalization of VT experiences as well as creating an opportunity to share perspective and coping strategies. Hodgkinson and Stewart (1998) studied social workers who had counseled survivors of a train crash and found that sharing their experience with their colleagues was their main coping strategy. Pearlman and MacIan (1993) found that the most common method of dealing with VT was discussion with colleagues according to 85% of trauma counselors' reports.

There are many ways group support can be offered and available within an organization. The culture of the organization is a good indicator of whether opportunities

will be provided for group support. Group support can be offered in the forms of treatment teams, case conferences, group case consultation, or clinical seminars (Bell et al., 2003).

Education and consultation. Education on trauma has been found to decrease the potential for VT (Bell et al., 2003). Pearlman and MacIain (1995) established that more experienced counselors are more likely to seek out continuing education and different methods of consultation and as a result experienced significantly less distress when working with trauma clients. Follette et al. (1994) found that 96% of mental health professionals reported that education regarding sexual abuse was essential to effective coping with challenging client cases. Moreover, Chrestman (1999) also found empirical support that showed that extra training and education decreased symptoms of PTSD in counselors working with clients who experienced trauma.

Community and Other Contextual Factors

Social support plays an important role in the lives of individuals who work with clients who have experienced trauma. Kassam-Adams (1995) conducted a study on 100 psychotherapists who worked in out-patient agencies. Approximately 50% of the subjects reported symptoms of STS, including symptoms of avoidance and intrusions. The subjects' stress levels were found to be inversely related to the levels of social support they had in their personal and professional lives. Ortlepp and Friedman (2002) found a statistically significant but moderate inverse relationship between social support and counselor's experience of STS, which was in agreement with Bartone, Ursano, Wright, and Ingraham (1989), and Hodgkinson and Shepherd (1994). Palm et al. (2004)

also maintain that sufficient social support outside of the work environment is necessary for self-care for disaster professionals (Polusny & Follette, 1995; Schauben & Frazier, 1995; Shakespeare-Finch, Smith, & Obst, 2002) in order to effectively meet their own needs.

Discussion

It is apparent by researchers in this field that CF, STS and VT is a multi-dimensional and complex phenomenon. A number of variables, either individually or in combination with other variables, have been identified as causing or being linked to CF, STS and VT. These variables cover several levels: the level of the individual mental health worker, the organizational level, and the community level.

Palm et al. (2004) make the argument that VT could be minimized or avoided in disaster workers by creating conditions that are conducive to healthy personal and occupational functioning. Additionally, Kirmayer (1996) points out that solely focusing on reducing the total number of trauma clients in the disaster worker's caseload and allowing for more of a variety of client issues is missing the bigger picture which is that the scope of the problem should also include organizational consideration.

Although a few interventions have been developed to mitigate the identified factors at all levels, research related to the effectiveness of these interventions is in its early stages. Many interventions are geared toward the client who has been the person primarily experiencing trauma. There is a growing need for interventions for the mental health worker who is the intervener for that primary trauma client. Some interventions are being modified from treating the traumatized to treating the secondarily traumatized

mental health worker. In the following section, the various interventions aimed at decreasing effects of CF, STS and VT will be discussed.

Interventions Targeting CF, STS and VT

Interventions targeting CF, STS, and VT fall into several different categories, target a variety of different risk factors and levels, are implemented in different settings and are delivered through a variety of modalities. Interventions that target CF, STS, and VT strive to: decrease numbing, flooding and hypervigilance (VanderKolk, McFarlane, & VanderHart, 1996); correct cognitive distortions that arise from trauma experience (Zoellner, Fitzgibbons, & Foa, 2001); assist individuals in returning to a previous level of adaptive functioning (Wilson, Friedman, & Lindy, 2001); and ensure safety from future overwhelming events (Herman, 1992). An overview of the interventions will be discussed below. These interventions will be categorized in terms of the primary level (individual and professional/organizational) that is the focus of the intervention.

Individual Level Interventions

The individual level interventions' foci are enhancement of self-consciousness and body awareness that include recognizing symptoms of CF, STS and VT. Individual coping style consistently was found to moderate the stress experienced by trauma counselors (Bartone et al., 1989; Follette et al., 1994; Hodgkinson & Shepherd, 1994). Self-care that relates to basic physical hygiene such as healthy eating, sleeping, and exercising is also an important factor on an individual level. Coping style and self-care are individual interventions that are usually measured in addition to the implementation

of a formalized intervention. In the following section, examples of two of these interventions that aim to decrease symptoms of CF, STS and VT will be discussed.

Cognitive behavioral therapy. The theoretical perspective of cognitive behavioral therapy (CBT) involves thoughts, cognitions, feelings, moods, and actions that are conceptualized as covert and overt behaviors. These behaviors are then learned through classical and operant conditioning or vicariously learned through modeling behaviors (Coady & Lehmann, 2008). Both the cognitive and behavioral schools of thought agreed to three assumptions of the learning theory which are: (1) behavior is influenced by experience; (2) learning is adaptive for the individual; and (3) learning is a process governed by natural laws that can be tested and studied (Payne, 2005).

CBT focuses on worker-to-patient empathy, understanding, and warmth which begins in the engagement phase and ideally lasts throughout treatment (Gambrill, 1995). CBT often requires the patient to do homework in order to successfully increase/decrease behaviors and/or cognitions that might be positive/negative in the patient's life. There are numerous interventions in CBT that are used dependent upon the problem brought to the therapist. Some examples are: systematic desensitization, behavioral activation, response prevention, self-monitoring, psychoeducation, anxiety/stress management, and cognitive restructuring (Coady & Lehmann, 2008). When this method is utilized with trauma professionals, the interventions focus on how the professional is interpreting their realities which has a direct effect on their coping skills (Inbar & Ganor, 2003).

Stress Inoculation Training. Stress Inoculation Training (SIT) is an example of a cognitive behavioral intervention that has been utilized with individuals and groups to

help reduce effects of secondary trauma and increase coping skills while working in stressful or traumatic situations (Inbar & Ganor, 2003; Meichenbaum, 1996). There are three components to SIT: (1) education; (2) coping skills training; and (3) exposure to simulated stressors (West, Horan, & Games, 1984). SIT has been evaluated in a variety of psychoeducation, prevention, and remediation programs (Meichenbaum & Deffenbacher, 1988). These programs include anger control (Timmons, Oehlert, Sumerall & Timmons, 1997), pain management (Hackett & Horan, 1980; Ross & Berger, 1996), test and other performance anxieties (Saunders, Driskell, Johnston, & Salas, 1996; Schneider & Nevid, 1993), student coping (Israelashvili, 1998), and occupational stress (West et al., 1984). Dane (2000) examined the nature of secondary trauma and how it impacts social workers in a child welfare agency. Dane then created and utilized a framework of stress inoculation training in a pilot program for child welfare workers. Although no pre or post-test was given to assess reduction of secondary traumatic symptoms and the author also cautioned that a definitive statement about the model's effectiveness cannot be made, participant evaluations indicated that the intervention was helpful.

Professional/Organizational Level Interventions

Although the primary focus of interventions used to prevent and decrease symptoms of VT has traditionally been on the individual, organizational level interventions can complement and enhance individual interventions. Some organizational interventions include the provision of supervision, workshops, and a supportive organizational culture (Inbar & Ganor, 2003). Dalton (2001) found that the number of

times a social worker received supervision and the number of hours of supervision were positively related to low levels of STS. The systemic social-organizational intervention is one that occurs typically in institutions that deal mainly with crisis and trauma situations (Inbar & Ganor, 2003). This intervention is more of an organizational culture that encourages effective coping strategies and problem-solving skills. The environment is one that allows for social and professional support while having to manage crisis and trauma situations on a regular basis (Inbar & Ganor, 2003).

Supervision and a supportive culture are organizational interventions that can be assessed in adjunct to more formalized interventions such as vicarious resiliency training, psychoeducational seminars, and various modalities of debriefing. These interventions will be discussed more in depth in the following sections.

Vicarious resiliency training. Vicarious resilience is a relatively new concept in trauma work. It reflects a reality that mental health professionals can experience positive outcomes in their mental and physical health due to improved clinical skills, reframing their experiences, and coping with traumatic events in the process (Reivich & Shatte, 2002). Therefore, vicarious resiliency training helps educate mental health workers on the various aspects VT so they can acquire enhanced knowledge and tools to manage future traumatic situations with the goal of turning the experience into a positive one.

In an unpublished dissertation, Shew (2010) carried out a study to determine the effectiveness of vicarious resiliency training with 25 professionals “who are at a high risk for developing vicarious trauma” (p. 4). The author collected data through questionnaires and followed a pre, post, and follow-up design where all 25 participants served as the

control and experimental groups. After four weeks, Shew (2010) found that 71% of the participants reported a positive change in their symptoms. The author concluded that “resiliency training is a potent way of mitigating the effects of vicarious trauma...and supports that resiliency training promotes awareness of vicarious trauma as a means to reduce the consequences of vicarious trauma” (Shew, 2010, p. 4).

Psychoeducational seminars. Psychoeducational seminars about the impact of VT are commonly recommended interventions for organizations. Meadors and Lamson (2008) conducted a study on the scope of CF and STS on health care providers who work on critical care units with children with a secondary aim of evaluating the effectiveness of providing psychoeducational seminars on CF to those same health care providers. Although only 1.1% of their subjects were social workers (2/185), their findings could possibly be applied to other professions that are exposed to traumatic situations. Meadors and Lamson’s findings were “overwhelmingly supportive” (p. 33) regarding the effectiveness of psychoeducational seminars on CF. They also found that their final hypothesis of “the posttest was predicted to reflect significant improvements on awareness of CF and identification of strategies to handle the different stressors that are associated with working on ICUs” (pp. 32-33) was also supported. Most importantly, the participants felt considerably “less tense, jittery, or overwhelmed while having increased feelings of being calm and peaceful” (p. 33) which results in a decreased clinical stress level.

Debriefing interventions. A phrase now found frequently in trauma literature is “debriefing the debriefers” (Kahill, 1998; McCann & Pearlman, 1990; Talbot, Manton, &

Dunn, 1992). Since CF, STS, and VT in mental health professionals who work with individuals who have experienced trauma has become more recognized, utilizing the various debriefing methods on the mental health debriefers is becoming more important in supporting mental health worker's own psychological and emotional health (Regehr, 2001). Although debriefing can allow for workers to ventilate and compare their experiences with fellow co-workers, it is also involves some controversy. Research outcomes regarding the effectiveness of crisis debriefing are mixed. Neria and Solomon (1999) found that non-controlled studies were effective in the debriefing method. Adversely, controlled studies found no effect on the reduction of stress symptoms after debriefing and additionally found that there was an increased psychopathology and increased vulnerability within debriefed subjects (Neria & Solomon, 1999). There are several types of debriefing methods that will be discussed in the following sections. These methods are not specifically used in reducing symptoms of CF, STS or VT in mental health workers which will be further discussed in the discussion section below.

Crisis Debriefing Model. An early intervention strategy is the Crisis Debriefing Model (Dyregrov, 1989; Mitchell, 1982; Raphael, 1986). The Crisis Debriefing Model is a brief group treatment approach that is typically limited to just one session. This session allows for participants to discuss their feelings regarding a specific traumatic incident that occurred that also involved everyone participating in the group. The goal is for the participants to ventilate their stress while learning and employing appropriate coping skills in order to move on emotionally from the trauma suffered (Everly, Boyle, & Lating, 1999). Variations of this model include psychological debriefing (Dyregrov,

1989; Raphael, 1986); Crisis Intervention Stress Debriefing (CISD) (Mitchell & Bray, 1990); community crisis response teams (Young, 1991); and multiple stressor debriefing model (Armstrong, O'Callahan, & Marmar, 1991).

Psychological debriefing. Psychological debriefing is an intervention that provides an opportunity for mental health workers to talk about their experiences who have assisted victims in a traumatic incident. The purpose is to provide a safe environment and allocate time for the workers to compare their experiences as well as verbalize any negative occurrences so these can be explored, resolved, and integrated so that the worker is able to transition back into their regular life (Talbot, Manton, & Dunn, 1992). Raphael (1986) discusses how the integration of the disaster is important for the worker because this gives the traumatic experience a cognitive structure “and the emotional release of reviewing it helps the worker to a sense of achievement and distancing” (p. 255). Furthermore, the integration also enables the worker to have the ability to move on emotionally from this experience and not continue to have ongoing symptoms of stress because of it.

Crisis Intervention Stress Debriefing. Crisis Intervention Stress Debriefing (CISD) is a method that is often used more for emergency service personnel workers (such as fire fighters, ambulance workers, police officers) or for workers who have experienced a particular crisis in the workplace (such as sudden death, bank hold-ups, serious injuries). The debriefing is exposure based when clients are encouraged to recall the specific events of a traumatic experience. The groups of workers take part in a structured discussion within 24 to 72 hours after the traumatic incident that emphasizes

normal thoughts, feelings and behavioral responses to abnormal events (Talbot et al., 1992). Hypothetically, as the experiences are recalled multiple times, the negative effects of the memories are supposed to decrease while being in a safe environment as well as minimizing the development of abnormal stress responses. Education about the events and processing the traumatic reactions are emphasized (Bisson, McFarlane, & Rose, 2000). However, researchers have found mixed effectiveness results with the CISD method and some studies have found that debriefing methods can even exacerbate stress symptoms (Regehr, 2001).

Rose and Bisson (1998) reviewed randomized controlled trials (RCTs) of CISD. In two of the six studies reviewed the treatment group significantly improved. In the remaining four studies, two showed no difference between groups while two showed an increase in psychiatric morbidity when exposed to treatment. Rose and Bisson found that the effectiveness of CISD may depend on the initial severity of trauma symptoms. They propose additionally, that the effectiveness of CISD may be affected by the individual's present level of functioning and trauma history.

Mitchell and Everly (1997) have projected that CISD be incorporated into critical incident stress management (CISM) which involves pre-trauma training, debriefing, and individual follow-up. Richards (2001) compared CISD and CISM with bank workers who were exposed to critical incidents. It was found that the CISM group of workers had significantly fewer trauma symptoms at three month and twelve month follow-ups than the CISD group (Richards, 2001).

While Mitchell's (1988) CISD debriefings, mainly applied to emergency

personnel, are focused on catharsis, Raphael's (1986) psychological debriefing includes the catharsis element but then expands the intervention to also include a discussion regarding the worker's experience of the trauma work, strengthening of the workers' relationships as a team as well as integrating the experience (Talbot et al., 1992).

Discussion. A number of interventions have been modified and developed to decrease symptoms of CF, STS and VT in mental health workers based on the known factors that have been implicated in contributing to CF, STS and VT. In theory, if the interventions are targeting known "causes" or factors, then the intervention techniques should be effective in reducing the problem of CF, STS and VT. Unfortunately, there seems to be very minimal outcome research to support the effectiveness of the interventions being developed and implemented that pertains specifically to mental health workers. The outcome research that has been published is scattered and focuses mainly on primary victims of trauma and other professions. This makes it difficult for policy makers and practitioners to use research to guide their decision making specifically for mental health workers. With limited outcome research, knowing which of the interventions to implement is challenging. One review of interventions and outcome research was conducted exploring the effectiveness of group psychological debriefing on VT. This review will be examined in terms of their findings.

Prior Reviews of Outcome Research Targeting CF, STS and VT

Published Reviews Exploring the Effects of Interventions on CF, STS, and VT

A search for previous reviews and meta-analyses of interventions related to the problems of CF, STS, and VT was undertaken. Nine databases (Academic Search

Premier, Dissertation & Theses @ Loyola, PILOTS, ProQuest, ProQuest Dissertations & Theses, PsycINFO, Social Service Abstracts, Sociological Abstracts, TRIP Database) were searched and one review of intervention research was identified. A summary of the findings of the search will be discussed below.

One meta-analysis was conducted by Everly, Boyle, and Lating (1999) and explored the effectiveness of group psychological debriefing with VT. The authors did describe their search strategy and did not include unpublished studies. This study included 10 investigations that yielded an aggregate pool of 698 subjects. In the 10 investigations, trauma symptoms, anxiety, depression, stress symptoms and the impact of events were measured through various instruments (i.e. IES, SCL-90, Beck's Depression Inventory, STAI, General Health Quest). In the studies that included more than one outcome variable, the outcome measures were combined within each study and then averaged. This study was not specific to mental health workers, and is unclear if any variation of mental health worker was included in this study. Regarding inclusion the authors state "the empirical investigations included in the current meta-analysis do indeed include applications in emergency and trauma medicine, but also extend beyond those venues to include subjects from law enforcement and primary victim subject pools" (Everly et al., 1999, p. 232). If "primary victim subject pools" were included, then this appears to be a mixture of PTSD and VT intervention effects. The authors concluded that "the results support the effectiveness of group psychological debriefings in alleviating the effects of vicarious psychological distress in emergency care providers" (p. 229).

Published Reviews of Related Outcome Research

One systematic review has been conducted to assess if STS is prevalent among nurses and to determine what instruments are used to measure STS in nurses. Outcomes of interventions were being reviewed and the population studied was not of mental health workers.

Discussion

There is a definite need for an increase in studies of outcomes of interventions in the CF, STS, and VT literature. From the literature reviews, there seems to be more attention to the definitional issues among the three constructs as well as assessing whether these constructs exist in various populations. Less attention has been assigned to outcomes of interventions. To date I have not been able to locate a meta-analysis or systematic review of interventions intended to decrease symptoms of CF, STS and VT. It is important to synthesize the intervention research to provide a comprehensive picture of interventions that are being utilized in the field to decrease symptoms of CF, STS and VT and to identify interventions that are effective and areas in which more research needs to be conducted to better inform social work practice.

CHAPTER THREE

METHODOLOGY

A systematic review and meta-analysis was conducted to examine and quantitatively synthesize research related to the effects of interventions intended to decrease symptoms of compassion fatigue, secondary traumatic stress and vicarious trauma in mental health workers to inform policy, practice and social work education.

A systematic review method was utilized for several reasons. The first reason is that the systematic review method assists with combining empirical data pertaining to mental health workers to find a clearer path on where research needs to be headed in order to further the effectiveness of interventions intended to decrease or prevent symptoms related to CF, STS and VT. A second reason is the systematic review method requires an explicit and well-defined process for searching and selecting studies included in the review as well as for coding and analyzing data found in the studies. This explicit and transparent process limits bias and reduces chance effects, leading to more reliable results (Higgins & Green, 2006). A well-defined process also allows for the review to be replicated and/or expanded either by other reviewers who want to expand upon the criteria established by the original reviewer or by adding additional studies in the future to the original review as more data becomes available.

Meta-analysis is a form of research integration that applies statistical analysis to quantitatively aggregate and compare results of different individual research studies

(Glass, McGaw, & Smith, 1981; Lipsey & Wilson, 2001). Meta-analysis offers several advantages over other means of research synthesis. As the amount of empirical research has grown, from perhaps a few studies one would find in the 1940's and 1950's to hundreds and even thousands of studies one would find on a particular topic today, the form of research integration has evolved. Narrative reviews of research may have been appropriate and satisfactory when few studies were available; however, it becomes increasingly difficult to narratively synthesize a vast amount of data when there are large numbers of studies (Glass et al., 1981). It is suggested that "the findings of multiple studies should be regarded as a complex data set, no more comprehensible without statistical analysis than would be hundreds of data points in one study. Contemporary research reviewing should be more technical and statistical than narrative" (Glass et al., 1981, p. 12).

Meta-analysis provides a way of organizing, handling and analyzing data from a large number of studies in a more differentiated and sophisticated way than narrative reviews or vote counting methods. Narrative reviews and vote counting methods make determinations about whether an intervention was effective based on the number of studies that were found to demonstrate statistically significant positive results. These methods disregard sample size, thus possibly leading to erroneous conclusions (Lipsey & Wilson, 2001). Meta-analysis, on the other hand, represents key findings in terms of effect size rather than statistical significance. Thus, meta-analysis provides information about the strength and importance of a relationship, the magnitude of the effects of interventions and the characteristics of the effective interventions (Lipsey & Wilson,

2001). Also, meta-analysis produces synthesized effect estimates by pooling effect sizes across studies, producing effect estimates that have more statistical power than an individual study alone (Lipsey & Wilson, 2001).

This study utilized a systematic method for every aspect of the review, following suggestions by Lipsey and Wilson (2001) and Littell, Corcoran and Pillai (2008). The inclusion and exclusion criteria for the studies that were searched as well as the explicit process was thoroughly documented and defined in this chapter. In order to reduce publication bias, every effort was made to locate and include both published and unpublished studies. All studies that met criteria for inclusion were using a coding instrument developed by this author. The coding instrument was utilized to extract data from each eligible study.

Criteria for Inclusion and Exclusion of Studies in the Review

The following criteria were used to determine whether a study would be included in the review:

1. Types of studies: Randomized Controlled Trials, Quasi-Experimental Designs and single group pre-posttest designs were included in the review.
2. Types of participants: Mental health workers who work directly with clients/patients and are experiencing symptoms of compassion fatigue, secondary traumatic stress and/or vicarious traumatization (as identified by the researchers) were included in this review. Studies in which participants had not been identified as having symptoms of compassion fatigue, secondary traumatic stress, and/or vicarious traumatization prior to the intervention were excluded.

3. Types of settings: This review included interventions conducted in any setting.
4. Types of intervention: Interventions with a stated primary goal of decreasing symptoms of compassion fatigue, secondary traumatic stress and/or vicarious traumatization among mental health workers.
5. Types of outcome measures: This review included only studies that measure compassion fatigue, secondary traumatic stress and/or vicarious traumatization. The secondary outcomes of burnout and compassion satisfaction were discovered in the process of the review. These results were also included in the results chapter.
6. Geographical context: There were no geographical limitations; however, only studies written in English were included.
7. Time period: This review included studies that were published between 1983 and 2012. Secondary traumatic stress was originated in 1983 and the concepts of compassion fatigue and vicarious traumatization followed in the 1990's which is why this time period was limited from 1983 through 2012 for this review.

Search Strategy for Identification of Relevant Studies

A comprehensive search strategy was utilized to search for studies that met the inclusion criteria defined above. Both published and unpublished studies were searched and retrieved when identified through the search strategy. Several sources were used to identify the eligible studies, including:

Electronic Databases

A total of 11 databases were searched (see Table 1). One librarian specializing in social work were consulted and met with in person to determine appropriate databases to

search as well as keyword search terms to utilize.

Table 1: Databases Searched

Academic Search Premier	Social Service Abstracts
Databases of Abstracts of Reviews of Effectiveness	Social Work Abstracts/Ovid
Pegasus	Sociological Abstracts
Published International Literature on Traumatic Stress	TRIP Database
ProQuest Dissertations and Theses	WorldCat
PsycINFO	

Keyword searches within each database included combinations of keywords grouped into three main categories:

- 1) Targeted problem: compassion fatigue OR secondary traumatic stress OR vicarious traumatization
AND
- 2) Intervention: evaluation OR intervention OR treatment OR outcome
AND
- 3) Targeted population: social worker OR mental health OR therapist OR counselor OR psychologist.

Internet and Website Searches

Websites of relevant research institutes, academies and professional associations were searched for published and unpublished studies. Some relevant websites included greencross.org (Academy of Traumatology), psychink.com (Traumatology Institute), socialworkers.org (NASW), charlesfigley.com, compassionfatigue.org, figleyinstitute.com, sharevision.net, tulane.edu, vicarioustrauma.com, and Google Scholar.

Personal Contacts

Personal contacts with researchers who do work in the field of compassion fatigue, secondary traumatization and vicarious traumatization were made via email and telephone. An email query of authors/researchers and experts in the area of compassion fatigue, secondary traumatic stress and vicarious traumatization were attempted in an effort to discover additional published or unpublished studies relevant to the systematic review. Phone calls were made to two researchers, Charles Figley and Ellen Landis, to discuss any additional research that might be relevant to this study. Contact was made via telephone to both Charles Figley and Ellen Landis.

Reference Lists

Reference lists of related prior reviews and related meta-analyses were reviewed for relevant studies. In addition, the references of the retrieved primary studies were examined for potential studies relevant for the review.

Conducting and Documenting the Search and Selection Process

All searches were tracked with the maintenance of a comprehensive search log maintained in Excel. This log includes: (1) search engines utilized; (2) database or main source searched; (3) keywords used for the search; (4) time period searched; and (5) number of hits. Also using Excel, a list of study titles, citations and inclusion decisions were documented. All titles and abstracts found in the searches were reviewed and screened. When the abstract appeared appropriate and relevant for the review, a full text of the study was obtained and reviewed and a decision for inclusion was made based on the entire article. For example, studies that would be deemed as inappropriate at the

title/abstract review phase would be that that do not involve the target population (e.g., mental health workers, social workers, psychologists, counselors or therapists) or were theoretical in nature where no intervention was being evaluated. All abstracts deemed potentially appropriate were retrieved in full text and assigned an identification number. The bibliographic information as well as location of where the study was found was entered into the Search Documentation Log, an Excel spreadsheet. If there was any question as to the appropriateness of the study at this stage, the full text was obtained and screened. If the study was in electronic format, the study was saved into a folder on the computer. If the study was obtained in hard copy, usually through InterLibrary Loan, the study was kept in a file cabinet.

Once the full text of the studies were retrieved and documented in Excel, each study was reviewed and the basic information needed to determine whether the study met the inclusion criteria was coded on the Screening Form (see Appendix B) and entered into the Search Documentation Log in Excel. For those studies that met all inclusion criteria described previously, data was extracted and entered onto the Study Coding Form (see Appendix C).

Results of Search

The database and website searches yielded 4,134 “hits”. After review of titles and abstracts, 191 of these were identified for full text retrieval. Of the 191, 32 of these studies were duplicates that were listed in more than one database/source. A total of 159 unique studies were retrieved for screening from the database search.

Email and telephone inquiries to authors/researchers in the field yielded no

studies for the screening phase. Reference lists of retrieved primary studies and related prior reviews yielded one study that was retrieved and screened for eligibility criteria.

Through an exhaustive search process, the full text of 159 studies were retrieved and screened for basic eligibility criteria. Five studies met the basic eligibility criteria. Of these five studies, three were single group pre-posttest studies, one was a quasi-experimental study and one was a randomized controlled trial. Of those studies, two single group pre-posttest studies met final eligibility criteria and were included in the review and meta-analysis. An explanation for the exclusion of the three studies from the analysis at this final stage can be found in the following section.

Studies Excluded After Coding

Cohen, Gagin, and Peled-Avram (2006) assessed the occurrence and levels of compassion fatigue and its correlates among hospital social workers in Israel after three years of recurrent terrorist attacks in 2003. A total of 53 participants filled out the Compassion Fatigue Self-Test (Figley, 1995). All of the participants were social workers with the degrees of either BSW (N=32), MSW (N=20) or PhD (N=1). The participants were divided into three groups according to which interventions they had taken part in within the past three years (prior to 2003) which included: (a) group supervision; (b) individual supervision; and/or (c) debriefing. The results showed that 75.5% of the participants had participated in debriefing sessions soon after the terrorist attacks, and “most” had participated in either individual or group supervision. The CFST results indicated moderate levels of secondary traumatization and low levels of burnout (Cohen et al., 2006). Although a pre-test was not given to determine levels of compassion fatigue

prior to the interventions, which was the reason for exclusion, Cohen et al. (2006) found that receiving supervision or participating in debriefing sessions did not yield any differences in secondary traumatization. They also conclude that the outcome of low levels of burnout was related to the subjects' participation in group supervision during 2002. Moreover the authors found that secondary traumatization was not associated with the number of terror attacks that each participant was involved in, nor with the demographic characteristics or their level of degree or seniority, nor with having individual or group supervision or participation in debriefing.

Novoa (2011) implemented a cross-sectional experimental study to examine the effects of Reiki on risk level for secondary traumatic stress (STS) among mental health professionals and students (N=67). Reiki is a form of energy therapy that research suggests relieves anxiety and stress (Novoa, 2011; Wardell & Engebretson, 2001), and depression (Novoa, 2011; Shore, 2004). According to Natale (2010), Reiki is based on the belief that when spiritual energy is channeled through a Reiki practitioner, the client's spirit is healed, which in turn heals the physical body. This study was excluded due to over 50% of the participants were students (61%) at the time of the study and had not yet practiced in the mental health field. The mental health workers and students were randomly assigned to three treatment groups: Reiki, placebo or control group. In this sample, the Reiki treatment was found to be non-effective on STS symptoms and risk for developing STS (Novoa, 2011).

Through an eight-week art therapy model of intervention, Van der Venet (2002) assessed whether the modality of art therapy is effective in helping to reduce secondary

trauma and burnout in mental health workers who work with clients who have experienced domestic violence and sexual trauma. This study was a quantitative single subject A-B design and a qualitative heuristic art-based phenomenological study. The components of the art therapy sessions included art projects such as: collage, mandalas, persona and shadow masks, self-portrait boxes, clay and painting. The author utilized the Trauma Symptom Inventory (TSI) as a pre-test for the quantitative results as well as self-report surveys for trauma and burnout. Van der Venet concluded that the model of art therapy is effective in reducing secondary trauma and burnout for mental health workers who work with domestic violence and sexual assault survivors. This study was excluded due to no TSI post-test given as well as only five out of the 12 subjects (less than 50%) were experiencing symptoms of secondary trauma prior to the intervention.

Strengths and Limitations of Excluded Studies

Strengths. The Cohen et al. (2006) study adds a new dimension in the supervision and debriefing research repertoire in that it was the first study to assess the existence of correlates of compassion fatigue in hospital social workers in Israel as a result of working with victims of bombing incidents and with the families of the victims. Van der Venet's (2002) study opens the door to alternative ways of coping and intervening with secondary traumatic stress by education and experience with different methods of art therapy. Participants in her study were able to obtain the capacity to apply new tools and interventions for self-care and self-exploration. Van der Venet's qualitative results supported that the art therapy module was effective in reducing secondary trauma and burnout for this particular population. One strength of the Novoa

(2011) study was it was the first to study effectiveness of Reiki on mental health professionals, which adds to the body of literature for intervention effects studies. This study also supports directing the field to continue attempting different intervention studies in order to come closer to those that work in the reduction of symptoms of compassion fatigue, secondary traumatic stress and vicarious traumatization in mental health workers.

Limitations. All three excluded studies mentioned small sample sizes as a limitation. Small sample size increases the risk of type II error and requires caution when interpreting results (Lipsey & Wilson, 2001). Cohen et al. (2006) intended to target all social workers that were employed in two different hospitals but not all agreed to participate. Cohen's study included 53 participants but did not represent social workers as a whole in Israel, where the study was carried out. Van der Venet (2002) used a small, non-random, convenience sample (N=12) which also limits this study's generalizability as well as the interaction history and treatment. Novoa (2011) also noted that her sample size (N=67) was smaller than originally planned and the generalization of her study is limited to populations with similar demographic characteristics and in similar settings. Novoa's participants were mostly Caucasian (85%), females (93%), married (36%), Christians (79%), and enrolled in an MSW program (61%) in South Louisiana.

The three excluded studies all used self-report measurement tools. Self-reporting instruments could possibly result in participants not answering questions truthfully by tailoring their responses to please the researcher or to be seen in a more favorable light.

All but one of Van der Vennet's (2002) instruments to measure trauma and burnout were unvalidated.

Other limitations of Van der Vennet's (2002) study include: using an A-B design with no control group for comparative statistics; no posttest given of the TSI; biography of the researcher (she worked for the agency at the time of the study); room changes for the study and participants being ill/attendance; and time constraints for the therapy group (Van der Vennet, 2002). Additional limitations of Novoa's (2011) study include: Reiki research outcome studies are limited; some participants had stated that they felt deceived by being in the placebo group; attrition in the placebo group (five participants left); participant maturation and time passage (study lasted 16 months); the long term effect of Reiki is unknown, therefore the difference in days since the last treatment to the posttest may not reflect the true outcome of study (Novoa, 2011).

Related Studies

Of the 159 studies retrieved and screened for basic eligibility criteria, 31 (19%) of these studies measured levels or symptoms of distress associated with compassion fatigue, secondary traumatic stress or vicarious traumatization. Eight of the 159 studies (5%) were intervention effects studies (which consist of the two included studies and the three excluded studies summarized above). Twenty-three (74%) of the 31 studies were unpublished dissertations. Of these 31 studies, 21 (68%) were specific to particular categories of mental health workers. These categories were: social workers, therapists (trauma treatment, therapists of traumatized children), psychotherapists, counselors (telephone, employee assistance program, and substance abuse), mental health

professionals, sex offender treatment providers, psychologists, community mental health practitioners, and Critical Incident Stress Management (CISM) clinicians. The remaining 10 (32%) studies did not include 100% of mental health workers as their subjects. Specifically, these studies included crisis intervention workers, combat deploying chaplains, domestic violence shelter staff, psychiatric nurses, psychology students, hospice workers and department of mental health workers/volunteers.

Intervention Effects Studies Without 100% Mental Health Worker Participants

In addition to the two included studies and the three studies that were excluded due to reasons cited above after study screening and coding, there were three unpublished dissertation studies that assessed intervention effects on decreasing symptoms of compassion fatigue and secondary traumatic stress. These studies were excluded due to not meeting the inclusion criteria requirement of participants being mental health workers, but these studies are important to the future of this field of study and are summarized in the following paragraphs.

In an unpublished dissertation, Shew (2010) carried out a quasi-experimental study to determine the effectiveness of vicarious resiliency training with 25 professionals who were determined to be a high risk for the development of vicarious traumatization solely due to their occupations involving work with individuals who have been traumatized and not according to any data collected that could determine risk. The participants (N=25) were from community agencies, hospitals, public health centers, the court system, church affiliations, and a refugee resettlement agency. The author collected data through questionnaires and followed a pre, post, and follow-up design where all

participants served as the control and experimental groups. The questionnaires included: a profile questionnaire; Traumatic Stress Reaction questionnaire; an evaluation of the Secondary Traumatic Resilience Training; and a Global Rating of Training. A post-test of the same questionnaires were given to participants to complete four-weeks after the training. Shew (2010) found that 71% of the participants reported a positive change in their vicarious trauma symptoms. The author concluded that “resiliency training is a potent way of mitigating the effects of vicarious trauma...and supports that resiliency training promotes awareness of vicarious trauma as a means to reduce the consequences of vicarious trauma” (p. 4).

In a second unpublished dissertation, Wlodarczyk (2010) carried out the first study of its kind to examine the effect of a single-session music therapy group intervention on feelings of disenfranchised grief as experienced by hospice workers. Doka (1989) introduced disenfranchised grief and defines it as when one experiences a loss that cannot be openly acknowledged, publicly mourned, or socially accepted. The secondary purpose of the study was to determine whether this group could also have an effect on hospice workers’ risk for compassion fatigue and their perception of their work environment one month after participation in the group. This study was a pre-test posttest randomized control group design with a second posttest administered 30 days after initial data collection. Participants (N=68) were divided into two equal groups: an assigned experimental group and an assigned control group. The experimental group completed pre-test and posttest measures before and after participation in an hour-long music therapy group intervention. The control group completed the posttest only with no

participation in a group. The results showed no significant differences between the experimental and control groups 30 days after the initial data collection and the overall risk for burnout and compassion fatigue was found to be low, as measured by the Compassion Satisfaction/Fatigue Self-Test (Figley & Stamm, 1996).

The third intervention study was the first to investigate the impact of working with domestic violence victims on domestic violence shelter workers (N=230) by examining levels of secondary traumatization in relation to the intervention of feedback (Jeffrey, 1999). The interventions utilized in this study to attempt to ameliorate symptoms of secondary traumatic stress were providing feedback and feedback with suggestions for improvement. Feedback was in the form of reports given to participants that varied according to whether they were in the experimental or control groups. No significant effects were found in the amelioration of secondary traumatic stress symptoms post-treatment.

Excluded Comparison Study

A fourth study worth discussion, though not an intervention effects study, is Ringenbach's (2009) on-line survey study that compared licensed professional counselors' (N=164) levels of compassion fatigue, compassion satisfaction, burnout, and self-compassion according to whether or not they practiced meditation. According to Neff (2003a), self-compassion refers to an emotionally positive self-attitude that may serve to protect the individual from negative self-evaluations, anxiety and depression. Ringenbach defined the meditation group's meditation experience as engaging in meditation at least 60 minutes per week for at least six consecutive months. The non-

meditation group was defined as no meditation practice or experience. Participants completed three on-line surveys that included: a demographic questionnaire; the Professional Quality of Life Scale (ProQOL; Stamm, 2005); and the Self-Compassion Scale (SCS; Neff, 2003b). The study found the meditation practice group (N=62) having significantly higher levels of self-compassion and showing lower levels of burnout than the non-meditation group (N=102). The study further reported that measures of self-compassion were positively associated with measures of compassion satisfaction and negatively associated with measures of burnout and compassion fatigue.

Summary

The six excluded intervention effects studies represent a wide range of interventions which include: supervision and debriefing, Reiki, music therapy, feedback, art therapy and vicarious resiliency training. Not one study has been replicated which is essential in determining which interventions are truly effective and worth implementing in order to reduce symptoms of compassion fatigue, secondary traumatic stress, and/or vicarious traumatization in mental health workers. Only two of the six intervention studies found positive results. The positive results for decreasing symptoms of secondary traumatic stress and burnout were found in Van der Venet's (2002) art therapy intervention study and in Shew's (2010) study for decreasing the effects of vicarious trauma through vicarious resiliency training. Since Ringenbach's (2009) study found that the meditation practice group had significantly higher levels of self-compassion and lower levels of burnout than the non-meditating group, although no intervention was

performed by the researcher, this study would be worth pursuing further as an intervention effects study in the very near future.

Data Extraction and Coding Procedures

The two studies that met the inclusion criteria were coded using a coding instrument designed by the author (see Appendix C). The coding instrument was comprised of six sections: (1) source descriptors and study context; (2) description of participants; (3) treatment/intervention descriptors; (4) research methods and quality; (5) effect size level coding, preliminary data; and (6) outcome/effect size data.

To ensure reliability of coding procedures, all studies included in this review were independently coded by this author and a second coder utilizing the data coding instrument discussed above. Any discrepancies in the codes were reviewed and discussed by authors. Discrepancies were resolved through consensus.

Statistical Analysis

The statistical analysis was designed to produce descriptive information on the characteristics of the studies included, the mean effect size of the interventions, the heterogeneity of effect sizes around those means, and the relationship between effect size and methodological qualities as well as substantive characteristics of the samples and interventions. Although moderator analyses were planned, and variables were identified and extracted during the data coding stage, moderator analysis was not possible due to only two studies meeting eligibility criteria for this review. Thus the relationship between effect sizes and methodological, substantive, and sample characteristics was not explored.

Calculation of Effect Sizes

Effect sizes were calculated for compassion fatigue, compassion satisfaction, and burnout as both included studies measured all three of these outcomes. To maintain statistical independence, only one effect size was computed for each outcome of interest (Littell, 2008). The effect sizes were calculated using Comprehensive Meta-Analysis (CMA) 2.0 (Borenstein, Hedges, Higgins, & Rothstein, 2005) by inputting the pre-test mean, post-test mean, sample size and paired groups t-values for each outcome in both studies. For the Landis study, the author did not report adequate statistics in the original report to calculate effect sizes. I sent a query to the author requesting the needed data and the author provided the raw data from the study for each participant. In this case, the pre- and post-test means and the paired groups' t-value was calculated using SPSS v.20 (IBM Corp., 2011) and then entered into CMA. Because both studies reported pre-post contrasts of a single group, the standardized mean gain effect size statistic was utilized. The standardized mean gain was calculated by subtracting the post-test mean from the pre-test mean divided by the pooled standard deviation of the Time 1 and Time 2 scores (Lipsey & Wilson, 2001).

Statistical Analysis of Effect Sizes

Meta-analysis was performed in CMA 2.0 to quantitatively synthesize the effects of the two included studies to calculate a grand mean effect size and confidence intervals around the mean effect size for each of the three outcomes of interest: compassion fatigue, burnout, and compassion satisfaction. A random-effects model using the method of inverse variance weighting was used. Weighted effect sizes were calculated by

multiplying each effect size by its inverse variance, giving studies with larger sample sizes greater weight. A random effects model assumes that the variability between studies is due to subject level sampling error as well as another random component assumed to be at the study-level (Lipsey & Wilson, 2001). Between study variance using a random effects model is conceived to be unsystematic and thus cannot be explained, whereas between study variance using a fixed effects model is conceived as being a function of study or intervention characteristics that can be systematically explained (Hedges, 1992). It was anticipated prior to conducting this meta-analysis that there would be significant variability between studies due to the diversity of interventions as well as participant and methodological characteristics of the studies, thus it was anticipated *a priori* that a random effects model would be assumed. Also, due to tests of heterogeneity, as described below, utilizing a random effects model was justified.

Test of Homogeneity

A test of homogeneity (Q -test) was conducted to compare the observed variance between studies to what would be expected from sampling error. The Q statistic is distributed as a chi-square with $k-1$ degrees of freedom (k = the number of effect sizes) (Hedges & Olkin, 1985). The Q statistic is calculated by adding the squared deviations of each study's effect size from the mean effect size, weighing their contribution by its inverse variance. A significant Q rejects the null hypothesis, indicating that the variability of effect sizes between studies is greater than what would be expected by sampling error alone. In the case of a significant Q -value, a random effects model is employed as it assumes the variability between studies is due to not only subject level sampling error,

but also due to an additional random component at the study-level (Lipsey & Wilson, 2001). Tests of homogeneity for each outcome were conducted in CMA.

Publication Bias

Publication bias can occur as a result of decisions on the part of authors as well as editors to publish studies with positive and significant effects at a greater frequency than publishing studies when findings may be insignificant, or run counter to the hypothesis or conventional wisdom (Cooper, 2010). Including only published studies in a meta-analysis could likely introduce an upward bias into the effect sizes (Lipsey & Wilson, 2001). Therefore, it is recommended that meta-analysis include both published and unpublished studies to minimize this bias (Cooper, 2010; Lipsey & Wilson, 2001). This review made every attempt to include both published and unpublished reports to minimize the occurrence of publication bias. Because this review included only two studies, one published and one unpublished, conducting formal analysis of publication bias (i.e., a scatterplot) was not possible.

CHAPTER FOUR

RESULTS

This chapter begins with a description of the studies included in this review and meta-analysis. Descriptive information regarding study characteristics, participant characteristics and intervention characteristics will be summarized for all of the studies included in the review. In the second part of the chapter, the results of the meta-analysis, including effect sizes and grand mean effect sizes of each outcome of interest will be presented.

In total, this chapter presents findings on 88 mental health workers who were participants in two independent samples reported in two studies of interventions intended to decrease symptoms of compassion fatigue and secondary trauma in mental health workers. Both studies were single group pre-posttest studies (SGPP).

Descriptive Analysis

Study Characteristics

Table 2 summarizes the characteristics of the included studies, which were published in 2004 (Study 1; Gentry, Baggerly, & Baranowsky, 2004) and 2010 (Study 2; Landis, 2010). Both studies were conducted in the United States. Researchers and practitioners from social work and psychology authored the studies included in this synthesis. Of the two studies included, Study 1 was published in a peer-reviewed journal and Study 2 was an unpublished dissertation. Sample sizes of the included studies were

Table 2: Summary of Study Characteristics

Author (year)	Intervention	Publication Type	N	Country of Study	Discipline of First Author	Measures	Length of Intervention
Gentry, Baggerly, & Barranowsky (2004)	Certified Compassion Fatigue Specialist Training (training-as- treatment)	Peer reviewed journal	83	US	LMHC Licensed Mental Health Counselor	CSFST	17-20 hours (over 2-3 day period)
Landis (2010)	Sharevision; 6 expressive arts-integrated workshops	Dissertation	5	US	LMFT Licensed Marriage and Family Therapist	CSFST, TRS, SRS, GCS	18.75 hours (over 12 wk period)

fairly small. The mean sample size of the two included SGPP studies was 44 (range 5-83; SD=39). Attrition was not a problem in either of the studies. Study 2 reported that the intention was to obtain a much larger sample size, but the researcher was not able to recruit the number of participants she had originally planned.

Study 1 (Gentry, Baggerly, & Baranowsky, 2004) examined the treatment effectiveness of a demonstration, training-as-treatment program called the Certified Compassion Fatigue Specialist Training (CCFST) in decreasing symptoms of compassion fatigue. Study 2 (Landis, 2010) examined the impact of a collaborative-reflective, expressive arts intervention on decreasing secondary trauma through a research project that combined six expressive arts-integrated workshops and an intervention called Sharevision (see Appendix D). Both included studies utilized the Compassion Satisfaction/Fatigue Self-Test (CSFST) (Figley, 1995; Figley & Stamm, 1996) to measure pre-posttest symptoms of compassion satisfaction, compassion fatigue, and burnout (see Appendix A). Study 2 also included three additional measures: (1) the Trauma Recovery Scale (TRS) which Gentry developed in 1996 to measure whether respondents met criteria for post-traumatic stress disorder (PTSD) and their potential ability to recover from trauma (Gentry, 1999; Appendix E); the Silencing Response Scale (SRS) (Baranowsky, 2002; Appendix F) to identify selective listening and active avoidance on the part of the therapist; and (3) the Global Check Set (GCS) (Baranowsky & Gentry, 1998; Appendix G) which evaluates aspects of clinicians' mental health in order to identify any significant psychopathology (Gentry, 2008). The length of time

researchers measured symptoms of compassion fatigue, compassion satisfaction and burnout at post-test ranged from 2 days to 12 weeks. There are no reports of any follow-up data that was collected.

Both studies measured three outcomes based on the subscales of the CSFST. The CSFST is a scale originally developed by Figley (1995) and was later revised by Figley & Stamm (1996). This 66-item scale assesses for compassion fatigue, compassion satisfaction and burnout with a 6-point Likert scale (0 = never, 5 = *very often*). Reported internal consistency reliability alphas range from 0.86 to 0.96 on two subscales from this instrument (i.e., compassion fatigue and burnout) and a structural reliability coefficient (Tuckers) of .91 was found (Figley & Stamm, 1996; Jenkins & Baird, 2002). Good evidence of reliability and internal consistency alpha scores for each of the three subscales has been found in the psychometric properties of the CSFST (Bride, Radey, Figley, 2007; Stamm, 2002). The CSFST is the only known instrument that measures both compassion fatigue and compassion satisfaction (Gentry et al., 2004). The outcomes of interest for this review include: compassion fatigue, burnout and compassion satisfaction. The first subscale of compassion fatigue is viewed as a component of secondary traumatic stress. According to Stamm (2010), CF has two parts. The first part involves symptoms such as exhaustion, frustration, anger and depression. The second part concerns feelings that are driven by fear as well as work-related trauma, which can be a combination of both primary and secondary trauma. Other symptoms include being afraid, having difficulty sleeping, having intrusive and upsetting

thoughts/images, or avoiding situations that remind one of the trauma. These symptoms are seen typically as having a rapid onset. Higher scores indicate that one might want to examine how one might feel about their work and their work environment.

Burnout is identified in the CSFST as being associated with feelings of hopelessness and having difficulties in managing work responsibilities or in performing in one's job effectively (Stamm, 2010). These symptoms usually have a gradual onset and can be associated with a high workload or an unsupportive work environment. These symptoms can also reflect feelings of self-unimportance as related to the work environment. Higher scores on this scale indicate that one is at a higher risk for burnout.

Compassion satisfaction, the third subscale, measures the pleasure derived from having the ability to do one's work well (Stamm, 2002). Higher scores on this scale represent a greater satisfaction related to one's ability to be an effective caregiver in one's job. Table 3 further summarizes how the subscale scores are interpreted as defined by the developers of the scale (Figley, 1995; Figley & Stamm, 1996).

Table 3: Ranges of CSFST Subscale Scores

Level of Risk/Potential	Burnout Level	Compassion Fatigue Level	Compassion Satisfaction Level
Extremely High	76-85	41 and above	118 and above
High	51-75	36-40	100-117
Moderate	37-50	31-35	82-99
Low		27-30	64-81
Extremely Low	36 or less	26 or less	63 or less

Although burnout, compassion fatigue and compassion satisfaction are the outcomes of interest in this synthesis, and the only outcomes for which effect sizes were calculated, it is interesting to note the other outcomes authors measured. Table 4 lists the other outcomes that were measured in Study 2.

Table 4: Other Outcomes Measured in Study 2

Other Outcomes Measured in Study 2
Active avoidance Active listening Depression Dissociation Generalized anxiety Post-traumatic stress disorder (PTSD) Potential ability to recover from PTSD Somatization Substance abuse Suicidality

Participant Characteristics

A total of 88 mental health workers participated in the two studies. Of those participating in the two studies, four mental health workers and one graduate student received the collaborative-reflective, expressive arts-integrated workshops and Sharevision and 83 mental health workers participated in the Certified Compassion Fatigue Specialist Training. Study 1 collected demographic data on only seven of their 83 participants. Table 5 summarizes the characteristics of the participants of the included studies.

Table 5: Participant Characteristics

Characteristics	N (%)
# of Participants	88
Mean age	45.7* 47**
Training Level	
Master's and Doctorate level	87 (99%)
Bachelor's level	1 (1%)
Sex	
Female**	4 (80%)
Male**	1 (20%)
Mean years of clinical experience*	17
Place of work at time of study	
Community human service organization	5 (6%)
Not given	83 (94%)

Notes: *Data from 7 of 83 participants in Study 1 only.

**Data from Study 2 only.

In Study 1, the mean age of 45.7 was calculated by the researchers for just seven of their 83 participants due to lack of demographic information collected for the remaining 76 participants. Study 2 had a mean age of 47 years old of the five participants. The studies included a mixture of training levels which integrated master's level social workers and counselors, doctorate level psychologists, a counseling psychology intern, and "mental health professionals." Neither study included statistical information about race/ethnicity. One author stated that all participants "appeared to be" Caucasian. Study 1 reported 100% (n=7) female participants of the seven of 83 participants that completed demographic information. Female participants comprised

80% (n=4) of the Study 2 sample. Study 1 reported 17 mean years of clinical experience of seven of their 83 participants. Study 2 did not include information related to the number of years of clinical experience per participant. Neither study included information regarding participants having specialized training with traumatized individuals prior to the intervention. Neither study reported information on demographics of participants' caseloads. Neither study reported information on the ages of clients they work with in the field. Study 1 recruited their participants from the International Traumatology Institute's marketing and advertising efforts which included mailings of over 5,000 brochures, radio, and periodical advertisement, as well as dissemination through the International Traumatology Institute's website; while Study 2 recruited participants from one community human service organization.

Intervention Characteristics

The interventions in this review represent a very limited range of modalities, components, providers, and settings due to the limited number of studies that met inclusion criteria. This review examined indicated interventions for mental health workers who have identified symptoms of compassion fatigue, secondary traumatic stress and/or vicarious traumatization.

Modalities and Components of Interventions

Two different interventions were evaluated in the studies included in this review. One modality was a specialized training-as-treatment intervention where participants took part in a Certified Compassion Fatigue Specialist Training (CCFST). The second

modality, which was an art therapy intervention, had several components. The participants took part in six collaborative-reflective, expressive arts-integrated workshops over a six week period then participated in a facilitated group led by the researcher called Sharevision on alternating weeks. During the non-facilitator Sharevision weeks, the group met and ran their own Sharevision meeting. Peer supervision, peer support groups, group case consultations, specialized trainings (Sharevision), a psychoeducational seminar on secondary trauma, and various expressive arts projects were all components of Study 2. The treatment format in both studies included both individual and group components. Table 6 provides a list of the interventions the two studies.

Table 6: Type of Intervention

Type of Intervention	Study
Certified Compassion Fatigue Specialist Training (CCFST)	Study 1
Collaborative-reflective, expressive arts-integrated workshops	Study 2
Sharevision	Study 2

The coding protocol for the review included numerous items to capture the various components of interventions. Both studies utilized a specialized training as part or all of the intervention. The author of Study 2 was contacted via email by this writer in order to ensure that all components of the intervention were accounted for through the coding process. This information was verified and all components were identified. This writer also attempted to contact the second author of Study 1, who was listed as the

contact person, but the email failed to send due to perhaps the email address no longer being valid.

Certified Compassion Fatigue Specialist Training

The Certified Compassion Fatigue Specialist Training (CCFST) (Gentry & Baranowsky, 1998) is a manualized protocol that is designed for mental health care professionals with at least a Master's degree (or an M.A. in progress), or four years of counseling work with on-going supervision. The training objective is to supply the tools necessary for the participant to implement interventions to decrease the effects of compassion fatigue in other caregivers as well as execute the five-session manualized and copyrighted Accelerated Recovery Program protocol (Gentry et al., 2004). This study was well defined. Although the treatment protocol was not included in the study, it is available through Corporate Crisis Management at www.CorporateCrisis.net which makes this study replicable (Gentry et al., 2004).

The CCFST is a combined course of didactic and experiential learning. Participants are taught theory and research on compassion fatigue, countertransference, posttraumatic stress disorder, secondary traumatic stress, vicarious traumatization and burnout (Gentry et al., 2004). Study 1 included two days of CCFST training. Day 1 explained the history etiology and phenomenology of compassion fatigue. A guided imagery exercise and ARP program overview followed. Next, an assessment, mission statement (small group exercise) and "telling the story" (dyadic exercise) were completed. Finally, a group discussion, closure and homework were given.

On day 2, anxiety management and resolution of secondary traumatic stress was taught. Participants then completed a self-assessment of anxiety and their own graphic time line. Next, Callahan's (1995) thought field therapy technique of tapping algorithms to release blocked energy and the Neuro Linguistic Programming anchoring technique for the desensitization and reprocessing of secondary traumatic stress were taught. Following these techniques, a large group debriefing was given. Self-supervision was subsequently instructed (coercion vs. guidance) via audio-dialogue as well as Gentry and Baranowsky's (1998) self-directed resiliency and anxiety reduction protocol of PATHWAYS. Finally, discussion, closure and a post-test concluded the two day training. Once the CCFST training is completed, the participant will be certified as a Compassion Fatigue Specialist by the Traumatology Institute in Canada (www.psychink.com).

Sharevision and Collaborative-Reflective Expressive Arts-Integrated Workshops

Study 2 was determined through the analysis to be considered a research project and was based on a pilot study written by the study's author (Landis, 2007). This study was comprised of (1) six collaborative-reflective, expressive arts-integrated workshops (with the researcher/facilitator present); and (2) Sharevision on alternating weeks (without the researcher/facilitator present). The six workshops entailed: (1) learning the collaborative-reflective design; (2) exploring participant's own experiences of secondary trauma; (3) communicating through expressive arts materials (puppet making, costume making, group expressive arts project); and (4) developing, performing and reflecting on

an arts-integrated group action project that represents their collective effort to interrupt the cycle of violence (Landis, 2010). Through telephone contact with Ellen Landis by this author, it was determined that these components of the intervention were present in Study 2: peer supervision; peer support groups; group case consultations; and a psychoeducational seminar on secondary trauma. The author's operationalization of the treatment procedures in Study 2 was very clear and well defined. This treatment could also be replicated based on the description provided in the study.

Setting

The setting of Study 1 was not able to be determined due to lack of information provided in the report. Study 2 was conducted in a small conference room in the community human service organization where the participants worked.

Setting Delivery: Providers

The authors of both included studies were involved in the delivery of the interventions they were testing. In Study 1, two of the three researchers provided six separate CCFST interventions. One researcher (Gentry) at the time of the study was a Licensed Mental Health Counselor, doctoral candidate, and Master Traumatologist. Gentry provided four of the six total trainings given to the participants. The second researcher (Baranowsky) in Study 1 was a PhD in Clinical Psychology and a Registered Traumatologist and provided instruction at one of the trainings. One of the six trainings was co-facilitated by both researchers. It is unclear if these researchers had supervision at any point during or after the implementation of the intervention.

In Study 2, the researcher provided one part of the intervention (6 collaborative-reflective, expressive arts interventions on alternating weeks) and the participants provided the second portion of the intervention to each other in a peer group (Sharevision) held without the researcher. The researcher in Study 2 was a Licensed Marriage and Family Therapist and a doctoral candidate in expressive arts. This researcher also had regular weekly supervision during the interventions and she continued supervision after the interventions were completed.

Funding Sources and Cost per Participant

The funding sources and cost per participant in Study 1 were unable to be determined due to lack of information. In Study 2, the researcher was offering the program for research towards her PhD, thus there was no cost associated with delivering the program other than the researcher's time.

Duration of Treatment

The intervention in Study 1 was a 2-day and 3-day training-as-treatment intervention. The CCFST was delivered six different times to a total of 83 participants. The original training was offered in a 20 hour, 3-day format, but later was revised to a shorter version offered in a 17 hour, 2-day format. Three hours were eliminated by (a) participants completing the informed consents, pre-training instruments, and the mission statement exercise prior to the training; (b) the dyadic exercise of sharing a chronological narrative of participants' professional experiences with a partner was shortened by one-half hour; and (c) the self-supervision exercise were shortened by one-half hour (Gentry

et al., 2004). A paired sample *t*-test was utilized to compare the CCFST 17-hour participants' (n=7) pre-test and post-test CSFST mean scores with the 20-hour CCFST participants' (n=76) scores. The paired sample *t*-test showed no significant difference between the 17-hour participants' and the 20-hour participants' scores, therefore the authors combined the participants' scores to obtain a larger sample size for the analysis (Gentry et al., 2004).

The second study evaluated an on-going intervention with a 12-week duration. Six workshops were held with the facilitator that lasted 1.5 hours every other week. Six workshops were held without the facilitator that lasted 1.5 hours every other week. Exit interviews were held with the facilitator that lasted .75 hours per participant individually. The mean number of hours of total contact with the facilitator present was 6.75 hours. The total dosage of treatment, or the mean number of total hours of contact between participants, was 18.75 hours.

Effect Size Analysis

The standardized mean gain effect size was calculated for the three outcomes measured and reported by both studies. Meta-analysis was conducted, assuming a random effects model, to synthesize the effects on each of the three outcomes of interest. These outcomes include compassion fatigue, compassion satisfaction and burnout (CSFST; Figley, 1995; Figley & Stamm, 1996). Overall, both studies demonstrated positive and significant effects on all three outcomes with the exception of the Landis study on the compassion satisfaction outcome. The grand mean effect size for each of the

three outcomes was large, but not significant; however, there were only two studies in the meta-analysis and significant variance between the studies was found, thus the grand mean effect size must be interpreted with much caution. Results on each outcome are presented below.

Mean Effects of Interventions on Compassion Fatigue

The Gentry, Baggerly, and Baranowsky study and the Landis study results indicate a large and significant effect on compassion fatigue. The mean effect of the Sharevision and collaborative-reflective, expressive arts-integrated workshops intervention was 3.2, a very large effect, while the mean effect size of the CCFST intervention was .96, also considered a large effect. The grand mean effect, 1.83, is also large; however, the confidence interval includes zero (CI -.34-4.00) indicating the mean effect size is not significant. Due to the small sample size of this synthesis and the included studies, as well as the variance found between the studies (discussed further below), the mean effect size is not very meaningful and must be cautiously interpreted.

The homogeneity of the effect size distribution was assessed. The results of the statistical test for homogeneity on burnout was significant ($Q=4.11$, $df(1)$, $p < .05$), thus rejecting the null hypothesis of homogeneity. The significant Q value indicates that there is substantial variance among the effects, more so than would be expected from sampling error alone. This was anticipated as these two interventions are quite different in terms of both intervention characteristics and sample characteristics as it relates to the mean pre-

test scores of the samples. Further analysis to assess the reasons for the variance was not possible due to the small sample size of this review.

Table 7: Mean Effect Size of Compassion Fatigue Outcomes

Study	N	Mean ES	SE	95% CI		<i>P</i>
				Low	High	
Gentry et al.	83	.96	.13	.70	1.22	.000
Landis	5	3.2	1.12	1.05	5.42	.004
Grand Mean	2	1.83	1.11	-.34	4.00	.099

Mean Effects of Interventions on Compassion Satisfaction

The Gentry et al. (2004) study results indicate a large and significant effect on compassion satisfaction. The Landis study results indicate a small and non-significant effect ($p=.743$) on compassion satisfaction. The mean effect of the Sharevision and collaborative-reflective, expressive arts-integrated intervention was .15, a small effect, while the mean effect of the CCFST intervention was 1.30, considered a very large effect. The grand mean effect, .80, is also large; however, the confidence interval includes zero (CI -.32-1.92) indicating the mean effect size is not significant. Again, due to the sample size of this synthesis and the included studies, as well as the variance found between the studies, the mean effect size is not very meaningful and must be cautiously interpreted.

The homogeneity of the effect size distribution was assessed. The results of the statistical test for homogeneity on burnout was significant ($Q= 5.94$, $df(1)$, $p < .05$), thus rejecting the null hypothesis of homogeneity. The significant Q value indicates that there is substantial variance among the effects, more so than would be expected from sampling

error alone. This was anticipated, as these two interventions are quite different in terms of both intervention characteristics and sample characteristics, particularly as it relates to the mean pre-test scores of the samples. Further analysis to assess the reasons for the variance was not possible due to the small sample size of this review.

Table 8: Mean Effect Size of Compassion Satisfaction Outcomes

Study	N	Mean ES	SE	95% CI		<i>P</i>
				Low	High	
Gentry et al.	83	1.30	.15	1.01	1.59	.000
Landis	5	.15	.45	-.73	1.03	.743
Grand Mean	2	.80	.57	-.32	1.92	.16

Mean Effects of Interventions on Burnout

The Gentry et al. (2004) study indicates a medium and significant effect on burnout. The Landis study indicates a very large and significant effect on burnout. The mean effect of the Sharevision and collaborative-reflective, expressive arts-integrated intervention was 3.25, a very large effect, while the mean effect of the CCFST intervention was .761, which is considered a medium effect. The grand mean effect, 1.76, is large; however the confidence interval includes zero (CI -.63-4.15) indicating the mean effect size is not significant. As in the other two outcomes, the mean effect size is not very meaningful and again must be cautiously interpreted due to the small sample size of this synthesis and the included studies, as well as the variance found between the studies.

The homogeneity of the effect size distribution was assessed. The results of the statistical test for homogeneity on burnout was significant ($Q= 4.87, df(1), p < .05$), thus rejecting the null hypothesis of homogeneity. The significant Q value indicates that there is substantial variance among the effects, more so than would be expected from sampling error alone. This was anticipated, as these two interventions are quite different in terms of both intervention characteristics and sample characteristics as it relates to the mean pre-test scores of the samples. Further analysis to assess the reasons for the variance was not possible due to the small sample size of this review.

Table 9: Mean Effect Size of Burnout Outcomes

Study	N	Mean ES	SE	95% CI		<i>P</i>
				Low	High	
Gentry et al.	83	.761	.13	.52	1.01	.004
Landis	5	3.25	1.12	1.05	5.45	.000
Grand Mean	2	1.76	1.22	-.63	4.15	.15

Summary of Findings

Six effect sizes from two studies were included in this review and meta-analysis. Although a small number of studies were expected due to significant research prior to the actual systematic review, it is alarming that only two studies met the inclusion criteria. With the constructs of compassion fatigue, secondary traumatic stress and vicarious traumatization being heavily present in the literature for the past two decades, it seems warranted to locate more research regarding intervention effectiveness on this topic as the constructs relate to mental health workers.

The sample sizes varied significantly among the two studies, although both samples are considered small. Each of the two study's pool of participants were similar, all coming from a mental health background. Almost all of the participants were female with only one male. The participants from the study with the intervention of Sharevision and the collaborative-reflective, expressive arts intervention were all recruited from the same place of work, which was a community human service organization in Massachusetts; however, the CCFST pool of participants' net was cast more widely through the International Traumatology Institute's marketing and advertising efforts, which included mailings of over 5,000 brochures, radio, and periodical advertisement, as well as information provided through their website. This mass recruitment could allow for a more diverse pool of participants with various types of mental health backgrounds.

Surprisingly, neither study provided thorough demographic data such as age, race, years of clinical experience, or type of clients treated. Study 1 did record demographic data only on seven of the 83 participants. The explanation for this by Gentry et al. (2004) was that the remaining 76 participants had participated in the 20-hour CCFST and the demographic data was simply not collected for this group. Having this additional demographic information could assist with the explanation and correlation of treatment effects and could provide further data in steering the direction of future studies.

The method in which the interventions were delivered in the two studies differed significantly. In Study 1, six separate CCFST 2-day (17-hours) and 3-day (20-hours) interventions were performed with six different groups of participants. Of those six, one

researcher led four CCFSTs, the second researcher led one CCFST and both researchers co-led the last CCFST. In Study 2, the researcher provided one part of the intervention (6 collaborative-reflective, expressive arts-integrated workshops) and the participants themselves provided the second part of the intervention (Sharevision) without the researcher present.

There are also fundamental differences in these two interventions besides the manner in which they were delivered. The CCFST intervention in Study 1 was a seminar format where the researchers led trainings on several different subjects and then the participants took part in small group and dyadic exercises. The original goal of the CCFST was to provide training to other helping professionals in order to implement the Accelerated Recovery Program (ARP). It was hypothesized by Gentry et al. (2004) that the CCFST would reduce compassion fatigue symptoms in participants of the training since the ARP had demonstrated effectiveness in decreasing compassion fatigue symptoms in caregivers.

The six workshops in Study 2 were art oriented in which participants created certain objects with supplies such as scissors, fabric, paper, glue and yarn along with pre-determined topics for group discussions led by the researcher. The Sharevision intervention in Study 2 was a group process directed by an agenda of questions created by the group and involved time limits with a time-keeper. According to Landis (2010), power is shared among the participants and a main goal of the interventions is to develop

new awareness that assists mental health workers in continuously building understandings of beliefs and patterns to improve their own lives and the lives of others.

The two included studies utilized the CSFST to measure outcomes based on the three subscales: compassion satisfaction, compassion fatigue and burnout. One study also employed three other measures to identify other outcomes of interest. The length of time researchers measured symptoms of compassion fatigue, compassion satisfaction and burnout varied greatly between studies. One study's post-test was on day two, the last day of the intervention; whereas the second study's post-test was given 12-weeks after the start of the intervention.

The results of the homogeneity tests in the two studies found significant heterogeneity among effect sizes for all three outcomes of interest. This indicates that the observed variance is significantly different from what would be expected by sampling error alone and that the mean effect size does not estimate the common population mean (Cooper, 1998; Lipsey & Wilson, 2001).

Further discussion of the findings as well as the implications for practice, research and social work education will be presented in the following chapter.

CHAPTER FIVE

DISCUSSION

This study presents the first systematic review and meta-analysis of indicated interventions for decreasing symptoms of compassion fatigue, secondary traumatic stress, and/or vicarious traumatization. While several narrative reviews have been written in the past, this systematic review provides a more comprehensive search and less biased review than had been conducted in the past. Moreover, the meta-analysis provides a quantitative synthesis of intervention outcomes that had been missing from the literature, although only two studies met the inclusion criteria which will be a later point of discussion. The purpose of this study was to locate and retrieve outcome studies of indicated interventions targeting mental health workers who have symptoms of compassion fatigue, secondary traumatic stress, or vicarious traumatization to (1) determine what this often confusing and overlapping body of research on compassion fatigue, secondary traumatic stress, and vicarious traumatization has produced and provide a descriptive overview of the current research; (2) examine the effects of these interventions on symptoms of compassion fatigue, secondary traumatic stress, and/or vicarious traumatization in mental health workers; (3) provide evidence-based recommendations to inform social work practice; and (4) recommend priorities for future research. This chapter will provide a discussion of the findings of the review and meta-

analysis and discuss implications for social work practice and research. An examination of the strengths and limitations of the study will follow.

Overview of Findings

This review and meta-analysis included one published and one unpublished study measuring three distinct outcomes of indicated interventions targeting symptoms of compassion fatigue, burnout and compassion satisfaction among mental health workers who had pre-identified symptoms of compassion fatigue. After a comprehensive and exhaustive search for studies, only two single group pre-posttest (SGPP) studies met the inclusion criteria for this systematic review and meta-analysis. There is a strong call for research in this area. We are not helping the helpers. If we do not help the helpers, how can mental health workers possibly help their clients?

The two studies in this review and meta-analysis represent the best empirical evidence currently available for outcomes of indicated interventions targeting mental health workers with symptoms of compassion fatigue, secondary traumatic stress or vicarious traumatization. A systematic review and meta-analysis of the current available research provides just a starting point to understanding effects interventions are having on decreasing symptoms of compassion fatigue, secondary traumatic stress and vicarious traumatization since conclusions cannot be made with such a small sample size. Moreover, systematic reviews and meta-analyses also provide a more transparent and valid analysis strategy than the alternative means of narrative reviews and vote counting methods (Valentine, Pigott, & Rothstein, 2010). In addition, it provides an inventory of

current evidence and a means to more systematically uncovering the gaps in the knowledge base (Lipsey & Wilson, 2001).

As evidenced by the lack of rigorous outcome research in this area, there is limited evidence of the effects of interventions to reduce symptoms of secondary traumatic stress, compassion fatigue and vicarious traumatization among mental health workers. The two included studies, both of which utilized a within-group research design, can provide some evidence of promise of effectiveness, but due to methodological deficiencies, particularly related to internal validity, we cannot infer that the interventions were causally related to the large and mostly significant effects found. The mean effects of the interventions included in this review, 1.83 for compassion fatigue, .80 for compassion satisfaction and 1.76 for burnout, were large but not significantly different from zero. Moreover, the large amount of heterogeneity and the small number of studies included in the meta-analysis significantly limits the interpretation of the mean effect of the included studies. However, when examined individually, the studies demonstrate some promise in achieving their desired effects. The approaches of the two interventions were rather different and the study methodologies and quality varied as well. The strengths and limitations of both studies will be further discussed in the following section.

Strengths and Limitations of Included Studies

The two included studies in this meta-analysis were quite diverse in their methodologies, although both studies reported a decrease in compassion fatigue symptoms. The results of Gentry et al.'s (2004) CCFST study suggest that the protocol

provides an effective intervention in the form of training-as-treatment. The training participants in this study experienced a reduction in compassion fatigue symptoms while learning how to implement the Accelerated Recovery Program (ARP) through the Certified Compassion Fatigue Specialist Training. The goal of the ARP is to reduce compassion fatigue symptoms in the participants of that program. The CCFST study not only demonstrated statistical significance in reduction of compassion fatigue symptoms but clinical significance as well. The CSFST measure that was utilized in this study is valid and reliable and is also the only known instrument that measures both compassion fatigue and compassion satisfaction (Figley, 1995; Figley & Stamm, 1996). A further strength of the CCFST study is the accessible step-by-step protocol which makes this study replicable.

The Landis (2010) Sharevision/collaborative-reflective, expressive arts-integrated study also utilized the CSFST tool which is considered valid and reliable and the only tool in existence that measures compassion fatigue and compassion satisfaction (Figley, 1995; Figley & Stamm, 1996). An additional strength of this study was the inclusion of a qualitative component where the researcher had three people code the transcript and well as included full transcripts to avoid abstraction and serve as evidence to support the legitimacy of identified emergent themes (Landis, 2010). This qualitative component added a more in depth understanding of the CSFST results for each participant. Finally, a Sharevision protocol is provided which also makes this study replicable.

Limitations

Though an encouraging start of the addition of intervention effectiveness studies in the literature, there were several limitations of the two included studies. The CCFST study had a small sample size (N=83) and lacked a randomized control and comparison group, therefore the results cannot be generalized to the entire population of mental health professionals and causal inferences cannot be made. Since the CCFST is considered a naturalistic, professional training program, random sampling or assignment procedures would be difficult. This study also did not record demographic data from 76 of the 83 participants which could have allowed further analysis such as correlations and predictive factors. Finally, the use of only one measurement tool which is also a self-reporting could be interpreted as a limitation, although the researchers point out that the CSFST is the only instrument that measures symptoms of compassion fatigue (Gentry et al., 2004; Figley, 1995; Figley & Stamm, 1996).

The limitations of the Landis (2010) Sharevision/collaborative-reflective, expressive arts-integrated intervention study include the study's small sample size (N=5) and the lack of a randomized control and comparison group. Therefore the results of this study also cannot be generalized to the entire mental health worker population and causal inferences cannot be made. A second limitation is that Landis was a non-neutral participant-observer with a bias toward the intervention approach. It could be possible that participants felt the need to please the researcher and censored or exaggerated their responses in their exit interviews. Finally, the researcher did not record demographics such as age or race which could have allowed for further analysis regarding predictive factors or correlations between variables.

Barriers to Research

Upon initial observation, it appears that a barrier to research is the fact that opportunities are not readily available in the implementation of intervention research studies among mental health workers. According to Figley and Landis (in email exchanges with this writer), this is due in part to lack of funding. If mental health workers were monetarily supported in their quest to determine intervention effectiveness on compassion fatigue, secondary traumatic stress and vicarious traumatization, then more research may be possible. In many of the studies examined in the process of this review and meta-analysis, the availability and willingness of mental health workers to commit to participating in research due to their busy schedules was described as a barrier. Landis (2010) and Wlodarczyk (2010) both made mention of having groups during the participants' lunch hour in order to accommodate their busy schedules and having the ability to follow-through with the research study. If organizations that work with traumatized clients were more open to allowing studies to be performed and supportive of the research process, more time could be allotted specifically for research purposes within those organizations. Bober and Regehr (2006) point out that there is little support within the workplace for psychotherapists who work with traumatized clients. Accepting and normalizing the fact that mental health workers do indeed suffer from compassion fatigue, secondary traumatic stress and vicarious traumatization would assist with removing this barrier to research.

Implications for Practice

It is difficult to make well-founded recommendations for practice based on the limited intervention effectiveness studies in the current literature and in this synthesis. In practical terms, the research can be summarized and will add to the meager intervention effectiveness studies in the literature.

Bober and Regehr (2006) point out that too much attention has been paid to individually focused interventions and coping rather than organizational approaches. Of the four studies that had positive outcomes, all involved a group dynamic as well as a training of some kind. It follows that group interventions appear to be not only more effective at this juncture, but also steers away from blaming the victim. Mental health worker's responses to a client's traumatic material should not be pathologized, according to McCann and Pearlman (1990), rather it should be normalized. By providing group interventions within organizations, workers receive the message that they are supported and that they are not alone in their suffering. The provision of intervention groups also can give hope and allow workers to feel optimistic when faced with client's traumatic material.

Pearlman and Saakvitne (1995) have recommended supervision to provide an avenue for mental health workers to confidentially and emotionally process the traumatic information from their clients. Supervision is helpful when group opportunities are not available and facilitates the worker in feeling supported and contributes to normalizing the situation. Rosenbloom, Pratt, and Pearlman (1999) suggest mental health workers have time for lunch, walks during the work day, and personal phone calls to help in

preventing and ameliorating symptoms of secondary traumatic stress. They also recommend that organizations provide vacations and flexible hours to improve mental health worker's job related experiences as they attend to individuals who have been traumatized. Landis (2010) suggests that organizations provide opportunities for employees to build connections that can foster a positive sense of community, which in turn can help to alleviate symptoms of compassion fatigue, secondary traumatic stress and vicarious traumatization.

Intervention programs should be embedded in organizations' policies and procedures where all new employees are subject to a training-as-treatment type of program, such as the Accelerated Recovery Program (ARP). These programs should also be provided on an on-going basis as refresher courses, perhaps every six months, for "tune-ups" and education on current research.

Implications for Research

Traumatic incidents are occurring all around the world on a daily basis. War, gun violence, natural disasters and even technological traumatic incidents such as cyber-bullying and accidents related to texting and driving are just naming a few. While these incidents are primary traumas causing posttraumatic stress in an individual, mental health professionals who work with traumatized individuals are also exposed to this trauma through hearing their clients' stories and witnessing the emotional responses. This secondary exposure to trauma can lead to problematic symptoms in the mental health professional and is a serious concern in the field of mental health and social work. The mid-nineties was the heyday for studies attempting to understand the phenomenon and

identify causes and correlates of compassion fatigue, secondary traumatic stress, and vicarious traumatization. Intervention effectiveness studies began to emerge in the early 2000's; however, intervention research in this area remains sparse and the serious methodological deficiencies within the extant research is concerning. Continuing to expand and improve intervention effectiveness research can lead the mental health field closer to more effectively managing and preventing symptoms of compassion fatigue, secondary traumatic stress and vicarious traumatization.

The interventions tested by Landis (2010) and Gentry et al. (2004) showed some promise in decreasing symptoms of compassion fatigue and burnout and increasing compassion satisfaction; however, these interventions need to be examined with more rigorous study designs. Major changes are recommended in order to further substantiate these studies. Both studies would be more effective with participant groups that are large enough to be generalized. Quasi-experimental conditions should be implemented, such as multiple baseline or wait-list control groups in order to determine if the treatment effect was due entirely to the intervention or other intervening variables. Complete demographic data should be collected on all participants. Gentry et al. (2004) contend that participant interviews added into their study could assist with distilling the information gathered from the CCFST's effectiveness. Qualitative approaches in all studies can ensure a more in-depth analysis and insight of the participants' experiences through the exploration of their responses. Gentry's study also includes a recommendation for future research to measure the effectiveness of the Accelerated

Recovery Program (ARP) in reducing compassion fatigue on the individual receiving the treatment.

Consideration of prospective longitudinal studies to examine compassion fatigue, secondary traumatic stress and vicarious traumatization over time could add to our understanding of secondary trauma in mental health workers and more effectively identify the prevalence and severity as well as factors related to risk and resilience. Greater understanding of risk and protective factors as well as the developmental course of secondary trauma could better inform the development of prevention and intervention. Another area of future research could be focused on resilience of mental health workers who regularly work with traumatized individuals but do not themselves appear to be negatively impacted. Understanding individual and organizational characteristics, as well as strategies employed by resilient professionals, could also aid in the development of prevention and intervention efforts.

Strengths and Limitations

As a practical implication, this study provides benefits to the enhancement of knowledge and improvement in interventions targeted at decreasing symptoms of compassion fatigue, secondary traumatic stress and vicarious traumatization as well as increasing compassion satisfaction among mental health professionals and other vulnerable professionals. Although a number of literature reviews on compassion fatigue, secondary traumatic stress and vicarious traumatization had been done in the past, this study improved upon prior reviews in two ways. First, this review applied a systematic and transparent process for searching, retrieving and coding studies to be

included in the review. Utilizing a systematic method to conduct the review of outcome research limits bias and reduces chance effects, leading to more reliable results (Higgins & Green, 2006). Utilizing an explicit and transparent description of the review process allows for the review to be replicated. It also allows for the expansion of the review, either by other reviewers who want to expand upon the criteria established by the original reviewer or by adding additional studies in the future to the original review as more data becomes available (Higgins & Green, 2006).

Second, a comprehensive search method was utilized to locate and retrieve studies which allowed for an unpublished study to be included in this review. Some prior reviews did not use the grey literature in their reviews. Reviews that include only published studies risk having findings that are upwardly biased (Glass et al., 1981; Wilson et al., 2001).

Limitations

Although an exhaustive search was undertaken, merely two studies met eligibility criteria for this review. The analysis includes only two studies due to the exclusion criteria of limiting to mental health workers, as well as largely due to a lack of empirical studies assessing effectiveness of interventions targeting compassion fatigue, secondary traumatic stress and vicarious traumatization.

Both studies included in this analysis met criteria as indicated interventions with the aim of decreasing symptoms of compassion fatigue, secondary traumatic stress or vicarious traumatization; however, the characteristics of the samples and the interventions varied considerably. In addition, although the grand mean effect size for

each of the three outcomes (compassion fatigue, burnout and compassion satisfaction) were large, but not significant, there were only two studies in the meta-analysis and significant variance between studies was found; therefore the grand mean effect size must be interpreted with much caution.

As in all research, the research questions asked and the way in which the problem under study is defined limits the study to the bounds determined by the question and problem definition. In research synthesis and meta-analysis, the study is both limited by the questions, problem definition and inclusion/exclusion criteria determined by the meta-analyst as well as the questions, problem definition and inclusion/exclusion criteria determined by the researchers of the included studies. This meta-analysis was limited to indicated interventions; only interventions with a stated goal of decreasing symptoms of compassion fatigue, secondary traumatic stress, and/or vicarious traumatization in mental health workers who had identified symptoms of compassion fatigue, secondary traumatic stress, and/or vicarious traumatization was included. This allowed the study to focus on a particular population of helpers, but it also limited the study. Including all intervention effects studies that assess CF, STS and VT on all occupations would give a clearer and richer view of what studies are out there and which interventions seem to be working.

The methodological shortcomings of the studies pose another limitation. The included studies had methodological deficiencies, including inadequate reporting of sample characteristics and lack of rigorous research designs. Both studies were single-group pre and post-test designs which are vulnerable to threats of internal validity such as: statistical regression, maturation, selection bias and testing effects (Littell et al.,

2008). Single-group pre and post-test (SGPP) design studies are typically excluded from systematic reviews and meta-analyses due to these threats. Since this systematic review and meta-analysis only found two eligible studies that happen to be SGPP studies, a decision was made to include these studies in order to provide a baseline for future systematic reviews and meta-analyses.

Conclusions

As an Employee Assistance Program (EAP) therapist, all walks of life were either required by their employer to discuss adverse events that occurred on the job or came in voluntarily to discuss certain traumas that they have experienced either recently or in their past to this researcher. It was here where I realized that I had to take this trauma with me as I walked to the train, as I ate my dinner, as I took care of my children, and as I went on with my own life as I knew it. But who was going to help me deal with my secondary trauma? How do I cope with these visions and thoughts that now permeate my daily life? Yes, I could go seek my own therapy, but true to form of a self-proclaimed compassionate therapist, I was concerned about contaminating *the other* therapist. In my mind, it seemed to be a vicious cycle.

Determining “what works” became a mission in my research. Finding what interventions are effective in decreasing compassion fatigue, secondary traumatic stress and vicarious traumatization could benefit so many helpers. Is compassion fatigue, secondary traumatic stress and vicarious traumatization the silent killer of mental health professionals’ occupational future? I have been told this by a helper in the field, but refused see the finality of it all. If mental health workers do not get help for their

symptoms of CF, STS or VT, do they lose their ability to *hear* the cries of their clients?

Yes. This phenomenon is called the Silencing Response (SR). It is defined as “a reaction which guide(s) the caregiver to redirect, shut down, minimize or neglect the disturbing information brought by the individual to the caregiver” (Baranowsky, 2002, p. 155).

Would they lose their ability for assisting with problem solving with their clients? Would mental health workers be unable to think positively and motivate their clients in making positive changes if they did not have an intervention to decrease or prevent their future symptoms of CF, STS and/or VT? Yes. Empirical research has established that helpers do suffer deleterious effects of CF, STS and VT when working with traumatized clients. What is more disturbing is why are “we” as mental health workers not more concerned about our own and our colleagues’ futures in this profession? If we suffer from CF, STS and VT, will our clients suffer as well? Yes. This defeats our whole purpose as helpers in this field. Are mental health workers feeding into the stigma about getting mental health help by not helping themselves? Are we being good role models for our clients?

While the constructs of compassion fatigue, secondary traumatic stress and vicarious traumatization are heavily researched as far as their definitions and causes and correlates, empirical studies are significantly lacking in the area of intervention effects on mental health workers. Are studies so overly focused on the client that we neglect to help the helpers? Does it take a significant amount of time for symptoms to surface, where in the past interventions were not necessary, but they are needed now? Or were the symptoms in mental health workers just ignored in the past? What has happened over the past twenty years that has caused mental health workers to feel more symptoms of CF,

STS or VT? Or are we just finally acknowledging that something must be done about ameliorating these symptoms? Is intervention and prevention an individual responsibility? Do we want to know how much or how little mental health workers may be suffering and how to mitigate the symptoms? Do mental health workers choose not to participate in studies because they do not want to face their own issues?

There should be a push for intervention and prevention on an organizational level. If mental health workers are expected to help others, then it should be expected that organizations help their employees and assist with ensuring longevity and good, solid mental health in their careers. Adhering to the coping skills and self-care techniques highlighted in Chapter Two of this study are important, but as many authors have pointed out, CF, STS, and VT should not be an individual's problem to solve. This would be blaming the victim and mental health workers need to be provided the opportunity for intervention and the support necessary to feel mentally stable in a sometimes unpredictable world of the client's traumatic stories.

The many discrepancies in the literature regarding definitional issues of these constructs, CF, STS and VT, continues to make this area of research confusing and what Stamm (2010) brilliantly labeled a "taxonomical conundrum". Many researchers have attempted to delineate these terms, but overall have been unsuccessful. Showing support for mental health workers by providing interventions to reduce symptoms of compassion fatigue, secondary traumatic stress and vicarious traumatization normalizes this very serious problem and helps in reducing the stigma of having to seek treatment. How do we expect to continue our work with clients if we are affected by what we hear and

experience through our clients? We, as mental health workers, need to practice what we preach and not continue to sweep our needs under the rug. We need to voice our concerns about the lack of research being done on intervention effects on compassion fatigue, secondary traumatic stress and vicarious traumatization and mental health workers and get this research moving in a positive direction.

Additional and more rigorous research is desperately needed to determine the effectiveness of interventions that decrease symptoms of CF, STS and VT in order for mental health workers and their employers to have the ability to choose a good fit, evidence based program for their agency to implement. Mental health workers who often put their own needs aside in order to help others should no longer have to sacrifice their own mental health in order to treat their clients. There is much to gain from further research in this field for mental health workers, organizations as a whole, and their clients.

APPENDIX A

COMPASSION SATISFACTION/FATIGUE SELF-TEST FOR HELPERS

Compassion Satisfaction/Fatigue Self-Test for Helpers

Adapted with permission from Figley, C.R., (1995). Compassion Fatigue, New York: Brunner/Mazel. © B. Hudnall Stamm, Traumatic Stress Research Group, 1995 -1998 <http://www.dartmouth.edu/~bhstamm/index.htm>.

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(b) no changes are made, & (c) it is not sold.*

Helping others puts you in direct contact with other people's lives. As you probably have experienced, your compassion for those you help has both positive and negative aspects. This self -test helps you estimate your compassion status: How much at risk you are of burnout and compassion fatigue and also the degree of satisfaction with your helping others. Consider each of the following characteristics about you and your current situation. Print a copy of this test so that you can fill out the numbers and keep them for your use. Using a pen or pencil, write in the number that honestly reflects how frequently you experienced these characteristics in the last week. Then follow the scoring directions at the end of the self-test.

0 Never	1 Rarely	2 A Few Times	3 Somewhat Often	4 Often	5 Very Often
------------	-------------	------------------	------------------------	------------	-----------------

Items About You

- _____ 1. I am happy.
- _____ 2. I find my life satisfying.
- _____ 3. I have beliefs that sustain me.
- _____ 4. I feel estranged from others.
- _____ 5. I find that I learn new things from those I care for.
- _____ 6. I force myself to avoid certain thoughts or feelings that remind me of a frightening experience.
- _____ 7. I find myself avoiding certain activities or situations because they remind me of a frightening experience.
- _____ 8. I have gaps in my memory about frightening events.
- _____ 9. I feel connected to others.
- _____ 10. I feel calm.
- _____ 11. I believe that I have a good balance between my work and my free time.
- _____ 12. I have difficulty falling or staying asleep.
- _____ 13. I have outburst of anger or irritability with little provocation
- _____ 14. I am the person I always wanted to be.
- _____ 15. I startle easily.
- _____ 16. While working with a victim, I thought about violence against the perpetrator.
- _____ 17. I am a sensitive person.
- _____ 18. I have flashbacks connected to those I help.
- _____ 19. I have good peer support when I need to work through a highly stressful experience.
- _____ 20. I have had first-hand experience with traumatic events in my adult life.
- _____ 21. I have had first-hand experience with traumatic events in my childhood.
- _____ 22. I think that I need to "work through" a traumatic experience in my life.
- _____ 23. I think that I need more close friends.
- _____ 24. I think that there is no one to talk with about highly stressful experiences.
- _____ 25. I have concluded that I work too hard for my own good.

- _____ 26. Working with those I help brings me a great deal of satisfaction.
- _____ 27. I feel invigorated after working with those I help.
- _____ 28. I am frightened of things a person I helped has said or done to me.
- _____ 29. I experience troubling dreams similar to those I help.
- _____ 30. I have happy thoughts about those I help and how I could help them.
- _____ 31. I have experienced intrusive thoughts of times with especially difficult people I helped.
- _____ 32. I have suddenly and involuntarily recalled a frightening experience while working with a person I helped.
- _____ 33. I am pre-occupied with more than one person I help.
- _____ 34. I am losing sleep over a person I help's traumatic experiences.
- _____ 35. I have joyful feelings about how I can help the victims I work with.
- _____ 36. I think that I might have been "infected" by the traumatic stress of those I help.
- _____ 37. I think that I might be positively "inoculated" by the traumatic stress of those I help.
- _____ 38. I remind myself to be less concerned about the well being of those I help.
- _____ 39. I have felt trapped by my work as a helper.
- _____ 40. I have a sense of hopelessness associated with working with those I help.
- _____ 41. I have felt "on edge" about various things and I attribute this to working with certain people I help.
- _____ 42. I wish that I could avoid working with some people I help.
- _____ 43. Some people I help are particularly enjoyable to work with.
- _____ 44. I have been in danger working with people I help.
- _____ 45. I feel that some people I help dislike me personally.

Items About Being a Helper and Your Helping Environment

- _____ 46. I like my work as a helper.
- _____ 47. I feel like I have the tools and resources that I need to do my work as a helper.
- _____ 48. I have felt weak, tired, run down as a result of my work as helper.
- _____ 49. I have felt depressed as a result of my work as a helper.
- _____ 50. I have thoughts that I am a "success" as a helper.
- _____ 51. I am unsuccessful at separating helping from personal life.
- _____ 52. I enjoy my co-workers.
- _____ 53. I depend on my co-workers to help me when I need it.
- _____ 54. My co-workers can depend on me for help when they need it.
- _____ 55. I trust my co-workers.
- _____ 56. I feel little compassion toward most of my co-workers
- _____ 57. I am pleased with how I am able to keep up with helping technology.
- _____ 58. I feel I am working more for the money/prestige than for personal fulfillment.
- _____ 59. Although I have to do paperwork that I don't like, I still have time to work with those I help.
- _____ 60. I find it difficult separating my personal life from my helper life.
- _____ 61. I am pleased with how I am able to keep up with helping techniques and protocols.
- _____ 62. I have a sense of worthlessness/disillusionment/resentment associated with my role as a helper.
- _____ 63. I have thoughts that I am a "failure" as a helper.
- _____ 64. I have thoughts that I am not succeeding at achieving my life goals.
- _____ 65. I have to deal with bureaucratic, unimportant tasks in my work as a helper.
- _____ 66. I plan to be a helper for a long time.

Scoring Instructions

Please note that research is ongoing on this scale and the following scores should be used as a guide, not confirmatory information. Cut points are theoretically derived and should be used with caution and only for educational purposes.

Be certain you respond to all items.

2. Mark the items for scoring:

Circle the following 23 items: 4, 6-8, 12, 13, 15, 16, 18, 20-22, 28, 29, 31-34, 36, 38-40, 44.

Put a check by the following 16 items: 17, 23-25, 41, 42, 45, 48, 49, 51, 56, 58, 60, 62-65.

Put an x by the following 26 items: 1-3, 5, 9-11, 14, 19, 26-27, 30, 35, 37, 43, 46-47, 50, 52-55, 57, 59, 61, 66.

3. Add the numbers you wrote next to the items for each set of items and note:

Your potential for Compassion Satisfaction (x): 118 and above=extremely high potential; 100-117=high potential; 82-99=good potential; 64-81=modest potential; below 63=low potential. **Your score** _____

Your risk for Burnout (check): 36 or less=extremely low risk; 37-50=moderate risk; 51-75=high risk; 76-85=extremely high risk. **Your score:** _____

Your risk for Compassion Fatigue (circle): 26 or less=extremely low risk, 27-30=low risk; 31-35=moderate risk; 36-40=high risk; 41 or more=extremely high risk. **Your score:** _____

Adapted with permission from Figley, C.R., (1995). Compassion Fatigue, New York: Brunner/Mazel. © B. Hudnall Stamm, Traumatic Stress Research Group, 1995 -1998
<http://www.dartmouth.edu/~bhstamm/index.htm>.

COMPASSION FATIGUE ASSESSMENT PROFILE

1. Compassion Satisfaction/Fatigue Self Test (Stamm & Figley, 1998, 1995)

Measures

Compassion Satisfaction

Compassion Fatigue

Burnout

Scoring

Circle the following 23 items: 4, 6-8, 12-13, 15-16, 18, 20-22, 28-29, 31-34, 36, 38-40, 44.

Put a check by the following 16 items: 17, 23-25, 41-42, 45, 48, 49, 51, 56, 58, 60, 62-65.

Put an "X" by the following 26 items: 1-3, 5, 9-11, 14, 19, 26-27, 30, 35, 37, 43, 46-47, 50, 52-55, 57, 59, 61, 66.

(Add the numbers you wrote next to the items for each set of items and note:)

Add all circled numbers for your *Compassion Fatigue risk factor*. TOTAL = _____

26 or less=extremely low risk; 27-30=low risk; 31-35=moderate risk; 36-40=high risk; 41 or more=extremely high risk.

Add all numbers with checks beside them for your *Burnout risk*: TOTAL = _____

36 or less=extremely low risk; 37-50=moderate risk; 51-75=high risk; 76-85=extremely high risk.

Total numbers marked "X" for *Compassion Satisfaction factor*: TOTAL=

118 and above=extremely high potential; 100-117=high potential; 82-99=good potential; 64-81=modest potential; below 63-0=low potential.

FURTHER INTERPRETATION (Figley)

Distinguish between changing jobs & changing ways: Look at your 3 sub-scores and the various combinations:

Score	Burnout Level	ComFat* Level	ComSat** Level
High	High Burnout	High CF	High Satisfaction
Medium	Mod Burnout	Mod CF	Mod Satisfaction
Low	Low Burnout	Low CF	Low Satisfaction

Change Careers: High Burnout, High CF, Low Satisfaction

Change Jobs: High Burnout, Low CF, High Satisfaction

Stay & Manage Stress: Low Burnout, High CF, Mod Satisfaction

Change Client: Low Burnout, Low CF, Low Satisfaction

*ComFat: Compassion Fatigue Level

**ComSat: Compassion Satisfaction Level

APPENDIX B
SCREENING FORM

Systematic Review Study Screening Form

A1. Study ID#: _____ [STID]

A1b. If this is a supplemental report of a study that has already been identified, [RID]
indicate report ID # (begin with #2) _____

A2. Date of Screening: ____ - ____ - ____ [SCDATE]

A3. Coder Initials _____ [CODER]

A4. Primary author: _____ [PAUTH]

A4b. Bibliographic info (APA format): [BIB]

A5. Does this study measure levels or symptoms of distress associated with CF, STS and/or VT as an outcome?

☐ 1. Yes

☐ 2. No (STOP)

A6. Was this study written in English?

☐ 1. Yes

☐ 2. No (STOP)

A7. Was this study published between 1983 and the present?

☐ 1. Yes

☐ 2. No (STOP)

☐ 99. Cannot tell

A8. Is this study reporting outcomes of an intervention targeting CF, STS, and/or VT?

☐ 1. Yes

☐ 2. No (STOP)

- A9. Is this study a:
- ☐ 1. RCT
 - ☐ 2. QED
 - ☐ 3. Single group pre-posttest design
 - ☐ 4. Other: _____
 - ☐ 99. Cannot tell
- A10. Describe the participants in the study:
- ☐ 1. Social Workers: _____
 - ☐ 2. Psychologists: _____
 - ☐ 3. Psychiatrists: _____
 - ☐ 4. Mental Health Workers: _____
 - ☐ 5. "Mental Health Professionals": _____
 - ☐ 6. Counselors: _____
 - ☐ 7. Volunteers: _____
 - ☐ 8. Masters in social work students: _____
 - ☐ 9. Licensed professional counselors: _____
 - ☐ 10. Whole organization/general population: _____
 - ☐ 11. Other specified population (e.g. workers with past trauma history): _____
 - ☐ 12. Non mental health workers (STOP)
 - ☐ 99. Cannot tell
- A11. Describe level of prevention/intervention
- ☐ 1. Universal
 - ☐ 2. Selective (at risk or other specified population- but not all having identified symptoms of CF, STS or VT)
 - ☐ 3. Indicated (mental health workers with pre-identified symptoms of CF, STS

and/or VT)

A12. Is this study eligible for the review?

☐ 1. Yes

☐ 2. No: Reason _____

☐ 3. Need more information to make decision

A13. Comments:

Stated goal of intervention:

APPENDIX C
STUDY CODING FORM

Study Coding Form

Study ID: _____ *Author:* _____

Year: _____

Date of Coding: _____ *Coder:* _____

SECTION A: SOURCE DESCRIPTORS AND STUDY CONTEXT

- A1. Type of report (SELECT ONE)
[PUBTP]
- ☐ 1. Journal article
 - ☐ 2. Book/book chapter
 - ☐ 3. Government report, Federal, state, local
 - ☐ 4. Conference proceedings
 - ☐ 5. Thesis or Dissertation
 - ☐ 6. Unpublished report (non-gov. tech report, convention paper, etc)
 - ☐ 7. Other: specify _____
- A2. Country in which study was conducted
[PUBSTDY]
- ☐ 1. USA
 - ☐ 2. UK
 - ☐ 3. Canada
 - ☐ 4. Australia
 - ☐ 5. Other: _____
 - ☐ 99. Cannot tell
- A3. Routine practice vs. Research project
- ☐ 1. Research Project: The intervention would not have been implemented without the interest/initiative of the researcher. The intervention is delivered by the research staff or by service providers trained by the researcher.
 - ☐ 2. Demonstration Project: May be implemented by researchers, but are quasi-real-world test of a promising program.
 - ☐ 3. Evaluation of “real-world” or routine program: Service agency implemented a program using routine personnel and typical clients-there may be an outside researcher who conducts the evaluation, but the program was already in place before the research began.

SECTION B: SAMPLE DESCRIPTORS

Description of Participants (Treatment and Comparison groups)

- B1. Mean age of participants [T-AGE]
- B2. Training level of participants [T-TRAIN]
☐ 1. High school diploma
☐ 2. Bachelors level
☐ 3. Masters level
☐ 4. Doctoral level
☐ 5. Mixture of levels
☐ 99. Not enough information to determine
- B3. Race/ethnicity- indicate predominant race/ethnicity [T-RACE]
☐ 1. Caucasian: _____ %
☐ 2. African-American: _____ %
☐ 3. Hispanic: _____ %
☐ 4. Asian: _____ %
☐ 5. Other racial minority: _____ %
☐ 99. Not able to determine
- B4. Sex [T-SEX]
 % Males _____ (use 999 if not enough information to determine)
- B5. Mean years of clinical experience _____ [T-CLEXP]
 (use 999 if not enough information to determine)
- B6. Specialized training with traumatized individuals prior to intervention [T-TRAIN]
☐ 1. Yes
☐ 2. No
☐ 99. Not able to determine
- B7. Average caseload percentage of clients with PTSD _____ [T-PTSD]
 (use 999 if not enough information to determine)
- B8. Age of clients (%) [T-CLAGE]
 % over 60 _____
 % 41-59 _____
 % 19-40 _____

% under 18 _____
 _____ Code 999 if not enough information to determine

- B9. Were the participants from a specified organization [T-POP]
- ☐ 1. No- participants were from general population
 - ☐ 2. Workers in a community mental health center
 - ☐ 3. Workers in a public agency
 - ☐ 4. Workers in in-patient care
 - ☐ 5. Workers in a private non-profit agency
 - ☐ 6. Workers in a private practice
 - ☐ 7. Workers in a crisis/disaster organization
 - ☐ 8. Workers in a professional organization
 - ☐ 9. Other: _____
 - ☐ 99. Not enough information

B10. What were the criteria for participants to be included in the study? [T-INC]

SECTION C: TREATMENT/INTERVENTION DESCRIPTORS

Treatment Group

C1. What is the name of the intervention received by treatment group?
 [TXNAME]

C2. Describe the program/intervention- specify all components

Of the above components, which is the focal component? (N/A if all are equal)

- C2a. How clearly did the author operationalize treatment procedures?
- ☐ 1. Very clear and well defined; treatment could be replicated based on description
 - ☐ 2. Provided general information about the program; well defined treatment of the program described is obtainable elsewhere and therefore could be replicated
 - ☐ 3. Provided general information about the program; replication would be difficult due to lack of specificity in describing specific processes or content
 - ☐ 4. Little description of the program; would be very difficult to replicate

based on information provided.

- ☐ 5. No description of the program was provided.

C2b. Is this a manualized program (did researchers or implementers use a written manual or guide to implement the program/intervention)?

- ☐ 0. No
☐ 1. Yes

C2c. Were the implementers trained on the program?

- ☐ 0. No
☐ 1. Yes, comprehensive training was provided
☐ 2. Yes, some training was provided
☐ 3. Unsure

C2d. Did implementers receive ongoing supervision or coaching?

- ☐ 0. No
☐ 1. Yes, the supervision component is built into the program implementation
☐ 2. Yes, supervision provided for purposes of the study, but not normally a part of the intervention.
☐ 3. Some oversight was provided, but not systematic
☐ 4. Unsure

C3. Describe the goal of the program/intervention (indicate N/A if authors did not state)

C4. What was the primary setting of the program?

[TXSET]

- ☐ 1. Social service organization
☐ 2. Community-based organization
☐ 3. Hospital
☐ 4. Mixed
☐ 5. Other (specify) _____
☐ 99. Not enough information to determine

C5. Who provided the intervention? (SELECT ALL THAT APPLY)
 [SVPRO]

- ☐ 1. Social worker
☐ 2. Counselor

- ☐ 3. Volunteer
- ☐ 4. Supervisor
- ☐ 5. Other personnel
- ☐ 6. Peers
- ☐ 7. Other (specify) _____
- ☐ 99. Not enough information to determine

C5a. Describe the participants in the study:

- ☐ 1. Social Workers:

- ☐ 2. Psychologists:

- ☐ 3. Psychiatrists:

- ☐ 4. "Mental Health Professionals":

- ☐ 5. Counselors:

- ☐ 6. Volunteers:

- ☐ 7. Masters in social work students:

- ☐ 8. Licensed professional counselors:

- ☐ 9. Whole organization/general population:

- ☐ 10. Other specified population (e.g. workers with past trauma history):

- ☐ 99. Cannot tell

C6. Role of the evaluator/author/research team or staff in the program. [ROLE]

- ☐ 1. Researcher delivered the treatment
- ☐ 2. Researcher involved in planning or designing the treatment
- ☐ 3. Researcher independent of treatment - research role only
- ☐ 99. Cannot tell

C7. Did the provider receive training on the intervention?

[PRTRN]

- ☐ 1. Yes

- ☐ 2. No
- ☐ 99. Not enough information to determine

C8. Treatment Format: (SELECT ALL THAT APPLY) [TX-FORM]

- ☐ 1. Individual
- ☐ 2. Group
- ☐ 3. Other

- ☐ 99. Not enough information to determine

C9. What are the components of this program/intervention? (SELECT ALL THAT APPLY) [PRCOMP]

- ☐ 1. Supervision – by supervisor/manager
- ☐ 2. Peer supervision
- ☐ 3. Peer group support
- ☐ 4. Treatment team meeting
- ☐ 5. Case conference
- ☐ 6. Group case consultation
- ☐ 7. Individual case consultation
- ☐ 8. Clinical seminar
- ☐ 9. Specialized training

Specify type: _____

- ☐ 10. Psychoeducational seminar

Specify topic if included: _____

- ☐ 11. Self-care (nutrition, exercise, etc.)
- ☐ 12. Social support
- ☐ 13. Other: _____

- ☐ 99. Not enough information to determine

C10. Duration of treatment [TX-DUR]

Mean # of weeks participant received intervention: _____

Mean # of sessions participant received intervention: _____

Mean # of hours that participant received intervention per session:

Code 99 if not enough information to determine.

C11. Frequency of contact between participants and provider (mean participation)

- ☐ 1. One time
- ☐ 2. Two times
- ☐ 3. Ongoing-specify mean # of hours total contact _____
- ☐ 99. Not enough information to determine

C12. Total dosage of treatment: Mean number of total hours of contact between participants

C13. How much did this program cost per participant? [COST]

- ☐ \$ _____
- ☐ 99. Not enough information to determine

C14. How was funding received for the program/intervention? [FUNDING]

- ☐ Government
- ☐ Community
- ☐ Organization
- ☐ Participant Fee
- ☐ Other: _____
- ☐ 99. Not enough information to determine

Comparison Group Condition Description

C15. What did the control/comparison group receive? [COMPTX]

- ☐ 1. Nothing or wait list
- ☐ 2. "Treatment as usual": Specify _____
- ☐ 3. Placebo/Attention
- ☐ 4. A specified treatment: Specify _____
- ☐ 5. Other: _____
- ☐ N/A No control group

C16. Describe what happened to the control/comparison group [COMPDESC]

SECTION D: RESEARCH METHODS AND QUALITY

D1. Research design type (must check 1-4 and if a retrospective study) [DES]

- ☐ 1. Experimental Design with Random assignment
- ☐ 2. Quasi-experimental design - Regression Discontinuity or time series
- ☐ 3. Quasi-experimental design - Comparison group, with Pre-test
- ☐ 4. Quasi-experimental design - Comparison group, no Pre-test
- ☐ 5. Single group pre-test post-test (SGPP)

D2. Unit of assignment to conditions [TXASSGN]

- ☐ 1. Individual
- ☐ 2. Group/Cluster: specify _____

- ☐ 3. Other: _____
- ☐ 99. Not enough information to determine
- ☐ N/A

D3. Results of statistical comparisons of pretest differences [STCOMP]

- ☐ 1. No comparisons made
- ☐ 2. No statistically significant differences
- ☐ 3. Significant differences judged unimportant by coder
- ☐ 4. Significant differences judged of uncertain importance by coder
- ☐ 5. Significant differences judged important by coder
- ☐ N/A

D4. If groups were non-equivalent, were statistical controls used?

- ☐ 1. Yes
- ☐ 2. No
- ☐ N/A

D5. Was there more than 20% attrition in either/both groups? [ATT]

- ☐ 1. No
- ☐ 2. Yes - in treatment group only
- ☐ 3. Yes - in comparison group only
- ☐ 4. Yes - in both groups

EFFECT SIZE LEVEL CODING- PRELIMINARY DATA

E1a. Construct measured [CONST]

- ☐ 1. Compassion Fatigue
- ☐ 2. Secondary Traumatic Stress
- ☐ 3. Vicarious Traumatization
- ☐ 4. Trauma related distress
- ☐ 5. Coping strategies
- ☐ 6. Other: _____

SECTION E: EFFECT SIZE LEVEL CODING

Dependent Measures Descriptors

E1. Measures used [MEAS]

- ☐ 1. Author developed scale
- ☐ 2. Compassion Fatigue Self-Test (CFST)
- ☐ 3. Professional Quality of Life Scale (ProQOL)
- ☐ 4. Traumatic Stress Institute's Belief Scale, Revision L (TSI-BSL)
- ☐ 5. Secondary Traumatic Stress Scale (STSS)

- ☐ 6. Symptom Checklist 90-Revised (SCL-90-R)
- ☐ 7. Impact Event Scale (IES)
- ☐ 8. Coping Strategies Inventory (CSI)
- ☐ 9. Beck's Depression Inventory
- ☐ 10. Other _____
- ☐ 99. Not enough information to determine

E2. Type of measure [MEASTP]

- ☐ 1. Archival report/work record
- ☐ 2. Rating scale, survey, checklist, questionnaire
- ☐ 3. Behavioral observation
- ☐ 4. Other: _____
- ☐ 99. Not enough information to determine

E3. Has the instrument that measured this construct demonstrated reliability and validity in this sample or similar samples OR use of public agency administrative data, behavioral or biological measures? [MEASREL]

- ☐ 1. Yes
- ☐ 2. No
- ☐ 99. Not enough information to determine

E4. Were follow-up data collected on this measure? [FWUP]

- ☐ 1. Yes
- ☐ 2. No

E5. Length of follow-up? [LENGTH]
of months : _____

Effect Size Data

- E6. Assigned N for treatment group _____ [ASSNTX]
- E7. Assigned N for comparison group _____ [ASSNCOMP]
- E8. Observed N for treatment group _____ [OBNTX]
- E9. Observed N for comparison group: _____ [OBNCOMP]
- E10. # of units assigned to TX group (if cluster-assigned study) [CLSTTXN]
- E11. # of units assigned to comparison group (if cluster-assigned study) [CLSTCTN]
- E12. Intraclass Correlation (ICC) for outcome measure (cluster study) [ICC]
- E13. Treatment group mean: _____ [ESTXM]
- E14. Comparison group mean: _____ [ESCGM]

- E15. Are the above means adjusted? [ESADJM]
☐ 1. Yes (explain) _____
☐ 2. No
- E16. Treatment group standard deviation _____ [ESTXSD]
 E17. Comparison group standard deviation _____ [ESCGSD]
 E18. t -value from an independent t -test or square root of F -value [ES-T]
 from a one-way analysis of variance (df 1) _____

Effect Size

- E19. Calculated effect size _____ [ES]
 E20. Calculated standard error of the effect size _____ [ESSE]

Decision Rule/Notes

- E21. Should this study be retained for the meta-analysis? [DEC]
☐ 1. Retain for review
☐ 2. Do NOT retain for review
☐ 3. Unsure- more information needed

Reason(s) study not to be included in the review:

APPENDIX D
SHAREVISION GUIDELINES

SHAREVISION GUIDELINES

Landis (2010)

Format

1. Moment of silence
2. Check-In
3. Create the agenda together
4. Divide up the time for each agenda item
5. Choose a time-keeper
6. First person presents her question
7. The time she uses leaves the amount of time remaining for others' input. For example, if the presenter has 15 minutes and introduces her question/situation in 3 minutes, the group has 11 minutes to divide equally between them. The presenter always gets a minute or 2 of that time to make a final statement.
8. If there is time left over, divide up the time for a second go-round about the same question.
9. Next person with an agenda item presents her question, gets reflections (same as above) until all agenda topics have been presented and everyone in the meeting has shared their ideas, reflections, feelings about each topic, given the agreed upon amount of time.

Guidelines

- Be consistent about the time (time-keeper gives a warning, sharing time equally allows everyone a chance to be heard).
- Talk about yourself, tell a story or describe your own experiences or thoughts.
- Give examples of what you have tried and found rather than give advice.
- Give each person her full time, rather than engage in back and forth talk.
- Focus on listening not rehearsing what you are going to say ahead of time.
- Focus on understanding what others are saying while listening.
- Be brief, concise with what you have to say, practice saying things simply.
- The person who puts the topic on the agenda and/or presents the question is in charge of her section of the meeting and the process.

Variations

- When there is time left over, feel free to suggest a dialogue (if it is your time).
- If someone else's question is similar to yours, feel free to suggest that you combine the time and have longer go-rounds (be sure both people have a chance to have a final word after the group has each shared their thoughts).

APPENDIX E
TRAUMA RECOVERY SCALE

TRS

TRAUMA RECOVERY SCALE J. Eric Gentry

PART I

___yes___no I have been exposed to a traumatic event in which **both** of the following were present: experienced, witnessed or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others, **AND** my response involved intense fear, helplessness or horror.

If **yes** is answered please complete Part II & III;

If **no** is answered complete Part III (omit Part II)

PART II

Directions: Please read the following list and check all that apply.

<u>Type Of Traumatic Event</u>	<u>Number of Times</u>	<u>Dates/Age(s)</u>
<input type="checkbox"/> 1. Childhood Sexual Abuse	_____	_____
<input type="checkbox"/> 2. Rape	_____	_____
<input type="checkbox"/> 3. Other Adult Sexual Assault/Abuse	_____	_____
<input type="checkbox"/> 4. Natural Disaster	_____	_____
<input type="checkbox"/> 5. Industrial Disaster	_____	_____
<input type="checkbox"/> 6. Motor Vehicle Accident	_____	_____
<input type="checkbox"/> 7. Combat Trauma	_____	_____
<input type="checkbox"/> 8. Witnessing Traumatic Event	_____	_____
<input type="checkbox"/> 9. Childhood Physical Abuse	_____	_____
<input type="checkbox"/> 10. Adult Physical Abuse	_____	_____
<input type="checkbox"/> 11. Victim Of Other Violent Crime	_____	_____
<input type="checkbox"/> 12. Captivity	_____	_____
<input type="checkbox"/> 13. Torture	_____	_____
<input type="checkbox"/> 14. Domestic Violence	_____	_____
<input type="checkbox"/> 15. Sexual Harassment	_____	_____
<input type="checkbox"/> 16. Threat of physical violence	_____	_____
<input type="checkbox"/> 17. Accidental physical injury	_____	_____
<input type="checkbox"/> 18. Humiliation	_____	_____
<input type="checkbox"/> 19. Property Loss	_____	_____
<input type="checkbox"/> 20. Death Of Loved One	_____	_____
<input type="checkbox"/> 21. Terrorism	_____	_____
<input type="checkbox"/> 23. Other: _____	_____	_____
<input type="checkbox"/> 24. Other: _____	_____	_____

☐ 25. Other: _____

Comments:

TRS TRAUMA RECOVERY SCALE

J. Eric Gentry

PART III

Place a mark on the line that best represents your experiences during the past week.

1. I make it through the day without distressing recollections of past events.

0% 100% of the time

2. I sleep free from nightmares.

0% 100% of the time

3. I am able to stay in control when I think of difficult memories.

0% 100% of the time

4. I do the things that I used to avoid (e.g., daily activities, social activities,
Thoughts of events and people connected with past events).

0% 100% of the time

5. I am safe.

0% 100% of the time

6. I feel safe.

0% 100% of the time

7. I have supportive relationships in my life.

0% 100% of the time

8. I find that I can now safely feel a full range of emotions.

0% 100% of the time

9. I can allow things to happen in my surroundings without needing to control them.

0% 100% of the time

10. I am able to concentrate on thoughts of my choice.

0% 100% of the time

11. I have a sense of hope about the future.

0% 100% of the time

AS – FS

Trauma Recovery Scale (Gentry, 1996, 1998)

Mean Score

Measures

PART I: Respondent's belief whether or not they meet Criterion A. (DSM-IV) for PTSD. This refers to whether they have been exposed directly or indirectly to a traumatic incident.

PART II: History of traumatic experiences

PART III: Relative recovery and stabilization from traumatic experiences.

Scoring

PARTS I & II do not require scoring.

PART III: Take the mean of the two answers for item #5 and add to the scores on all other items. Divide by ten and you will arrive at a mean score. If score is < 50 then significant traumatic stress; If score is > 75 then significant recovery (or minimal traumatic stress).

APPENDIX F
SILENCING RESPONSE SCALE

Silencing Response Scale (Baranowsky, 1996, 1998)

INSTRUCTIONS: This scale was developed to help caregivers identify specific communication struggles in their work. Choose the number that best reflects your experience using the following rating system, where 1 signifies rarely or never and 10 means very often. Answer all items to the best of your ability as they reflect your feelings over the previous two work weeks.

1=Rarely/Never ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10=Always Sometimes
--

- (1)____ Are there times when you believe your client(s) is repeating emotional issues you feel were already covered?
- (2)____ Do you get angry with client(s)?
- (3)____ Are there times when you react with sarcasm toward your client(s)?
- (4)____ Are there times when you fake interest?
- (5)____ Do you feel that listening to certain experiences of your client(s) will not help?
- (6)____ Do you feel that letting your client talk about their trauma will hurt them?
- (7)____ Do you feel that listening to your client's experiences will hurt you?
- (8)____ Are there times that you blame your client for the bad things that have happened to them?
- (9)____ Are there times when you are unable to believe what your client is telling you because what they are describing seems overly traumatic?
- (10)____ Are there times when you feel numb, avoidant or apathetic before meeting with certain clients?
- (11)____ Do you consistently support certain clients in avoiding important therapeutic material despite ample time to address their concerns?
- (12)____ Are there times when sessions do not seem to be going well or the client's treatment progress appears to be blocked?
- (13)____ You become negatively aroused when a client is angry with you.
- (14)____ Are there times when you cannot remember what a client has just said?
- (15)____ Are there times when you cannot focus on what a client is saying?

TOTAL = _____

Silencing Response Scale (Baranowsky, 1996, 1998)**Measures**

The silencing response

Scoring

To score total all response scores to arrive at the sum of scores.

High risk = 95 - 150; Moderate risk = 41 - 94; Some risk = 21 - 40; Minimal risk = 0 - 20.

APPENDIX G
GLOBAL CHECK SET

GLOBAL CHECK SET (GCS, Baranowsky & Gentry, 1998)

Name: _____ Date: _____ Birth Date: _____ Sex: M , F

Instructions: Read through each statement responding to items in a manner that best describes your experience over the previous 2 work weeks. Some questions relate to the present and some to the past, respond accordingly.

	Never Almost	Rarely	Some times	Frequently Always	
1-a. I drink alcoholic beverages daily.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
2-d. I feel sad, empty or become tearful.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
3-s. I feel hopeless or worthless.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
4-p. I have been exposed directly or indirectly (i.e., family, friend) to a traumatic event.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
5-x. I worry and feel anxious.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
6-i. My body is usually pain free.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
7-c. I am unable to clearly recall past traumatic experiences.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
8-a. I use illegal drugs daily.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
9-d. My sleep is disrupted or I awake tired.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
10-s. I have a positive and cheerful attitude to life.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
11-p. I have frequent recollections to a traumatic incident (i.e., thoughts, dreams, flashbacks).	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
12-x. I seem to be unable to control my worries or fears	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
13-i. I worry about my health.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
14-c. I do not know how I came to be at some place.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
15-a. Drug or alcohol use interferes with my work ability.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
16-d. I am no longer interested in the activities I used to enjoy.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
17-s. I think about ending my life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
18-i. I have not been well due to diagnosed physical illness(es).	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
19-c. I easily recall important personal information about myself.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
20-a. Drugs/alcohol have negatively impacted my personal life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
21-d. I have a lot of energy.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
22-s. I have a specific plan to end my life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
23-p. I am quick to anger.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
24-x. I always feel on edge.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
25-i. I have frequent headaches.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
26-c. I act out of character and feel I don't know myself.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
27-a. Drugs or alcohol are a problem in my life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
28-d. I have lost or gained more than 10 lbs. recently.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

29-s. I fear that my life will never improve.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
30-p. I avoid people, places or things that are trauma reminders.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
31-x. My concentration is good.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
32-i. I am afraid I will become seriously ill in the future.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
33-c. I feel outside of myself - detached like an observer.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
34-p. I am fairly relaxed and do not startle easily.	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
35-x. I feel irritable most of the time.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

$\frac{\quad}{d} + \frac{\quad}{a} + \frac{\quad}{s} + \frac{\quad}{p} + \frac{\quad}{x} + \frac{\quad}{i} + \frac{\quad}{c} = \frac{\quad}{\text{TOTAL GSC SCORE}}$

Global Check Set (Baranowsky & Gentry, 1998)

Measures

Psychological Disorders – including **Depression(d)** (# 2, 9, 16, 21, 28), **Substance Use(a)** (# 1, 8, 15, 20, 27), **Suicidality(s)** (# 3, 10, 17, 22, 29), **PTSD(p)** (# 4, 11, 23, 30, 34), **Generalized Anxiety Disorder(x)** (# 5, 12, 24, 31, 35), **Somatization(i)** (# 6, 13, 18, 25, 32), and **Dissociation(c)** (# 7, 14, 19, 26, 33).

Scoring

Total sum of scores as listed on scale items (Total GSC Score)

For greater clarification total sub-scores for subscales above (d, a, s, p, x, i, c)

Higher Scores signify greater psychological distress – compare scores over time

Scores of ≥ 70 = significant psychological symptomatology

This scale is not to be used for diagnostic purposes.

APPENDIX H

STUDIES INCLUDED IN THE SYSTEMATIC REVIEW/META-ANALYSIS

- Gentry, J. E., Baggerly, J., & Baranowsky, A. (2004). Training-as-treatment: Effectiveness of the Certified Compassion Fatigue Specialist training. *International Journal of Emergency Mental Health*, 6(3), 147-155.
- Landis, E. M. (2010). Sharevision: A collaborative-reflective, expressive arts intervention to address secondary trauma. Unpublished dissertation. Lesley University. Cambridge, MA.

APPENDIX I
EXCLUDED STUDIES

Excluded Studies	Type of Study	Reason for Exclusion
Cohen, M., Gagin, R., & Peled-Avram, M. (2006)	QED	No pre-test; unclear if participants had symptoms of CF, STS, or VT prior to intervention
Novoa, M. P. (2011)	RCT	Over 50% of participants were students (not mental health workers)
Van der Vennet, R. (2002)	SGPP	No post-test; less than 50% of participants were experiencing STS prior to intervention

APPENDIX J

KEY FEATURES OF PRIOR STUDIES AND NARRATIVE LITERATURE

Author(s) and Pub. Year	Study Method if study//or type of paper	Targeted Problem	Study Population	Assessment	Search Strategy Specified if synthesis or review//Or//Measurement Tool Used if Study	Exclusions specified	Databases Specified	Critical Appraisals/Hypotheses/ Questions	Summary of Conclusions
Sabin-Farrell & Turpin 2003	Narrative-trad. lit review	VT	Mental Health Workers	1) direct trauma exposure; 2) personal attributes of workers	1) papers pub. in journals; 2) papers in peer reviewed e-journals; 3) books	Dissertations Theses	PsychLit PsychINFO Medline Embase PILOTS Internet	Org. relevance of VT and its possible implications for the mgmt of MH workers	Quantitative evidence to support the existence of VT is meager and inconsistent; qualitative studies provide considerable support for the definition and existence of this phenomenon in trauma workers.
Beck 2010	Systematic Review	STS	Nurses: forensic, ER, oncology, pediatric, hospice	STS in Nurses	No	No	CINAHL PubMed PsychINFO	What studies have been conducted on STS in nurses in all clinical specialties? What instruments were used to measure STS in nurses and what psychometric properties were reported?	7 studies were found STS was reported in forensic, ER, oncology, pediatric, and hospice nurses. Instruments used: STS Scale, CF Self-Test for Helpers, CF Scale-Revised
Cunningham 2003	Cross-Sectional Empirical Study	VT	Social workers who were members of Internat'l Society of Traumatic Stress Studies and the Association of Oncology Social Workers	Relationship between cognitive schemas and human induced trauma (i.e. sexual abuse) or naturally caused trauma (i.e. cancer)	Questionnaire n=182	No	N/A	1. There will be a + relationship betw/ % of sexually abused clts in caseload & neg worldview in the areas of safety (self & other), trust of others, & esteem of others. 2. There will be a + relationship betw/% of clts w/cancer in caseload & a neg worldview in the areas of safety (self & other). 3. Clinicians working w/clts who were sexually abused will report more disruptions in the schemas of other-trust and other-esteem than clinicians working with clts who have cancer.	Clinicians who worked primarily with clients who were sexually abused reported more disruptions in cognitive schemas than clinicians who worked with clients who had cancer.

Baird & Kracen 2006	Research Synthesis	VT STS	?	Clarifies the definitions of VT and STS and uses levels of evidence analysis to synthesize the research findings to date	Published research (peer reviewed scientific journals and studies pub. as bk chpts) and dissertations in English from 1994-2003	No	PsychLit Medline UMI	Seeking to identify correlates of both VT and STS due to the lack of clarity in the literature	Important predictors of VT: pervasive evidence exists for personal trauma hx; reasonable evidence for perceived coping style; some evidence for supervision experiences Development of STS: pervasive evidence for amt exposure to trauma material; reasonable evidence for personal trauma hx
Najjar et al. 2009	Narrative-trad. lit review	CF	Cancer care providers: nurses, trauma sufferers or workers	Prevalence of CF among cancer care providers, instruments used to detect it and means of prevention and tx.	Studies with "CF" in keywords	No	Ovid Medline CINAHL Health&Psy chosocial instruments Ovid Healthstar	Attempt to define CF. Identify the effects of CF in the healthcare setting, its risk factors, prevalence among cancer-care providers and methods of measurement, prevention and treatment	Evidence suggests that CF takes a toll not only on cancer-care providers but also on the workplace. Conclusions were limited by an ambiguous definition of CF that fails to adequately differentiate it from related constructs (e.g. burnout, STS) and the modest number of cancer-related studies found.
Pearlman & MacLan 1995	Quan study	VT	Self-identified trauma therapists	Effects of trauma work on trauma therapists	Questionnaires n=188 TSI Belief Scale Symptom Checklist-90-Rev	No	N/A	First attempt to operationalize and measure VT; develop dep.var. that might indicate the existence of VT; develop ind.var. that might predict VT	Newest to work: experienced more psychological difficulties; Therapists with personal trauma hx had more sig effects than those without
Schauben & Frazier 1995	Quan & Qual Study	VT PTSD	Counselors who work with sexual violence survivors and sexual violence survivor clients	Assess the psychological consequences of working with sexual violence survivors	n=148	No	N/A	Assess the effects of working with sexual violence survivors	Counselors who had a higher percentage of sexual violence survivor clients reported more disruptions in basic cognitive schemas, more sx's of PTSD, and more self-reported VT. Counselors with a hx of victimization were more distressed than those without.

Craig & Sprang 2010	Quan study	Compassion satisfaction, CF and burnout	Nat'l sample of self-identified trauma specialists (Licensed SWers and Licensed Psychologists)	Investigating the impact of using EBP on CF, burnout and CS	ProQOL-III 19-item Trauma Practices Questionnaire n=532	No	N/A		CMHC workers sig higher CS scores than private non-profit workers; in-pt care workers sig more CF than those in CMHC and sig more than private practice workers; in-pt care workers sig more burnout than CMHC workers
Devilley, Wright, Varker (2009)	Quan study	VT, STS, burnout	Australian MHPs in clinical practice psychologists(125), psychotherapists(15), clinical SWers (6), psychiatrist(1), nurse(1)	Effect of trauma therapy on MHPs	N=152 DASS-21 CBI STSS TSI Belief- Scale-Rev-L IRI ISEL-12	No	N/A	Proposed these contributors to VT: exposure to trauma pts, chronicity of trauma work, indiv capacity for emotional empathy, hx of pers trauma	Exposure to pts' traumatic material did not affect STS, VT or burnout, contradicting the theory of the originators of STS and VT. Rather, it was found that work-related stressors best predicted therapist distress
Badger 2005	Dissertation/exploratory study	Indirect trauma exposure	Hospital social workers employed in 5 separate trauma centers	Impact of indirect trauma exposure on hospital social workers	N=121 Interpersonal Reactivity Index Emotional Sep Scale Work Related Strain Inventory Multidimensional Scale of Perceived Social Support STS Scale World Assumption Scale	No	N/A	Are empathy, emotional separation, occupational stress, social support predictive factors to traumatic stress and cognitive disturbance in hospital swers?	Findings supported: emotional sep as being stronger predictor of STS compared to empathy; that STS and cog disturbance appear to be separate constructs; emotional sep rather than empathy may more accurately create the conduit for indirect traumatic stress reactions; swers need to emotionally separate from their pts during empathic connections while utilizing support resources to minimize indirect trauma reactions
Bride 2007	Survey	STS	Master's level SWers licensed in southern U.S. state	Prevalence of STS among social workers	N=282 DIQ STSS	7 exclusions due to missing data; 5 exclusions due to swers not practicing during time of survey	N/A	Investigate the prevalence of STS in a sample of swers by examining the freq of indiv sx's, the freq with which diagnostic criteria for PTSD are met, and the severity of STS levels	Intrusive thoughts-most freq reported sx Psychological distress-next freq reported sx

Boscarino, Figley & Adams 2004	Survey	CF	SWers with Master's or higher living in NYC	CF following the Sept 11 terrorist attacks	N=236 Mailed surveys	No	N/A	Assess the potential prevalence of CF among SWers who cared for victims of the Sept 11 attack in NYC and to test hypoth that, controlling for demographics, trauma hx, and social support, SWers more involved in counseling victims of the attack were at greater risk for CF	Controlling for demo factors, yrs of counseling, pers trauma hx, ST was positively assoc with WTC recovery involvement and neg assoc with having a supportive environment. Job burnout was neg assoc with having supportive work environ, but not assoc with WTC involvement or WTC counseling efforts.
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VITA

Melissa L. Bercier received her Bachelor of Arts degree in Sociology from the University of Wisconsin-Madison in 1994 and earned her Masters of Social Work degree from Loyola University Chicago in 1997. Following her Master's degree and prior to pursuing her doctoral education at Loyola University Chicago, Melissa worked in the field of social work for 13 years in the areas of in-patient psychiatric social work, community mental health and employee assistance program (EAP) work providing direct service as well as having held supervisory and management/director roles.